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ABSTRACT

This report concerns first-year activities of a study of alternative futures. The study attempted to identify major trends and possible events that could influence vocational education in the 1980s and to analyze policy issues likely to be associated with them. Following the introduction, chapter 2 addresses procedures followed in each of three main tasks: (1) Delphi study, (2) analysis of external trends likely to influence vocational education, and (3) conference. Chapter 3 presents results from the third round of a Delphi study of estimates of the probability and impact of thirty-six possible events: the panel for this consisted of national leaders and scholars of vocational education. Chapter 4 contains an overview of the proceedings of the Conference on Alternative Futures for Vocational Education held at the National Center for Research in Vocational Education (January 8-9, 1980) and summaries of major presentations and discussions. One presentation summarizes main findings of the study of forecasts of trends likely to be of significance and the analysis of their policy implications. Appendixes, amounting to over one-half of the report, include the full report of the study on trends (also available separately as ED 189 370), National Institute of Education Vocational Education Study--A Progress Report, and Recommendations by the American Vocational Association Legislative Study Teams. (YLB)

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TRENDS, EVENTS AND ISSUES LIKELY TO INFLUENCE VOCATIONAL EDUCATION IN THE 1980s

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FOREWORD

What will vocational education be like in the 1980s? It is impossible to answer this question with any degree of certainty, but it is possible to identify many of the trends in society that are of significance to vocational education and to anticipate some of the events and policy decisions that could have major impact on the field.

This report describes a study being conducted at the National Center which is designed to increase our understanding of the factors that will be of most importance to vocational education in the 1980s. The information produced by this study should be useful to vocational educators and others who may wish to influence future directions for the field. The study is supported under a contract between the National Center and the Bureau of Occupational and Adult Education, U.S. Office of Education.

Because vocational education interacts with so many institutions in society, it was necessary to draw upon many different individuals and organizations in the conduct of this study. Special thanks are extended to the panelists who participated in the Delphi study and to the participants who attended the conference on alternative futures for vocational education. These individuals brought a wide variety of experiences and perspectives which helped to broaden our thinking about alternative futures.

The Institute for the Future, Menlo Park, California, also played a special role by preparing, under a subcontract with the National Center, the report Policy Choices in Vocational Education. This report, which is reproduced as Appendix B, examines a number of changes in the environment for vocational education that appear likely in the coming decade.

Permission to reproduce two other documents relevant to the future of vocational education was kindly granted by Henry David, National Institute for Education, and Gene Bottoms, American Vocational Association.

Appreciation is also extended to Samuel Goldman, Ohio University, who as a consultant and as a temporary member of the project staff helped to plan and carry out the study, and to Morgan Lewis, who directed the project, and Jill Russell, who shared the responsibilities for its conduct and for the preparation of the report.

Robert E. Taylor
Executive Director
National Center for Research in
Vocational Education

EXECUTIVE SUMMARY

This is a report on work in progress on a study of alternative futures for vocational education. This study is designed to be of help to those who have the responsibility to set directions for vocational education. It is an attempt to identify and analyze the factors that are likely to influence the field in the 1980s and the kinds of decisions that will be necessary to lead to alternative futures that are judged to be more desirable.

The activities discussed in this report were focused on identifying the trends, events, and issues likely to influence vocational education in the 1980s. In the next year of this study, the emphasis will be on selecting those factors that appear to be most crucial to the future of vocational education and to conducting an intensive analysis and integration of those factors.

During this first year, three main activities were carried out. The first was a projection of major trends in society which have implications for vocational education. The second was a Delphi study of the probability and potential impact on the field of possible future events. The third was a conference on alternative futures to which selected participants were invited.

From the many trends and possible events that were identified by these activities, the projections listed below occurred with such frequency in so many different contexts that they appear virtually certain to have major influence on vocational education in the 1980s:

- Because of the decline in births in the 1960s and 1970s, there will be fewer young people in the sixteen to twenty-four age range from which vocational education has traditionally drawn about three-fourths of its students.

- As a consequence of the reduced number of young people, there will be fewer new entrants into the labor force.

- The number of adults thirty-five and older in vocational education seems very likely to increase, causing higher proportions of students at the postsecondary and adult levels.

- The reduced number of young people, competing demands for public funds, and pressure to reduce government spending will probably lead to a decline in the proportion of the gross national product that education receives.

- The emphasis in federal education legislation will continue to be on increasing equity, on providing services to groups with special needs and on overcoming sex stereotyping.

- The extent of federal influence upon state and local activities in vocational education is likely to remain at about the present level.

- Vocational education will probably become a more varied enterprise with regard to the characteristics of its students, the kinds of services it provides, and the number and kinds of cooperative agreements it has with business, industry, and labor.

- Competency based instruction will become increasingly used in vocational education.

All of these projections, as well as many others whose occurrence appear less certain, are discussed in fuller detail in this report.

CHAPTER 1

INTRODUCTION

By most measures, such as number of students, number of programs, quality of facilities, and level of support from the general public, vocational education has never been stronger than at present. Since the passage of the Vocational Education Act of 1963, the field has experienced unprecedented growth and improvement. In the 1963-64 school year, the last before the Act was in effect, enrollments in federally aided vocational classes were 4.6 million and total expenditures were $333 million. In the 1977-78 school year, the latest for which data are available, enrollments were 16.7 million and total expenditures were $5.6 billion. Enrollments have thus increased almost four times, and expenditures--even when adjusted for inflation--have increased almost eight times from their 1963-64 levels.

In the period since the 1963 Act, most other areas of education have shown a heightened sensitivity to the vocational implications of their activities. Two influences seem to have been mainly responsible for this increased sensitivity. One influence, primarily felt in the public schools, has been the career education emphasis promoted by Sidney Marland during his tenure as Commissioner and Assistant Secretary for Education. The career education approach has not produced the kinds of changes desired by its proponents or feared by its critics, but at a minimum, it seems to have made educators more aware of the need to relate what happens in the schools to what happens outside them.

The second influence, which has increased vocational awareness at the postsecondary level, has been a softening of the labor market for college graduates whose education did not provide specific occupational skills. As stories of Ph.D's driving taxicabs and college graduates pumping gas became common, the popularity of liberal arts courses diminished and college students increasingly turned to majors with direct occupational links.

At no time has the awareness of the relationships between education and work been higher or more widespread. At such a time one might assume that vocational education, as the prime

example of close education-work linkages, would be a model for other types of education. Such is not the case. Despite impressive signs of strength and growth, vocational education faces an uncertain future.

The most recent federal legislation governing the field, the Education Amendments of 1976, has a strong evaluation emphasis. Through these Amendments Congress appears to say, in effect, let us examine whether the field has produced the results that were expected. The Amendments describe in considerable detail the evaluation activities to be conducted as part of program operation and monitoring, and also mandate an independent evaluation of the field to be administered through the National Institute of Education.

The questioning mood in Congress has also been reflected in the executive branch. In 1978, for the first time since the 1963 Act, a president proposed an actual cut in federal appropriations for vocational education. This proposal was accompanied by a statement from the Secretary of Health, Education, and Welfare that characterized vocational education as one of the "least effective" programs in the Department. Although this statement was subsequently qualified and the proposed budget cut restored, these signs reflect what can be described, at best, as a skeptical attitude toward the field.

Contributing to this skepticism is the uncertainty about the degree to which vocational education can carry out its primary function of preparing people for employment while emphasizing service to individuals with special needs and overcoming sex stereotyping. Public Law 94-482 specifically states: "...each state shall evaluate...each such program which purports to impact entry level job skills according to the extent to which program completers and leavers--'(i) find employment in occupations related to their training, and '(ii) are considered by their employers to be well-trained and prepared for employment ...(Sec 112 (b) (1) (B))." At the same time vocational education is to give special emphasis to the handicapped, disadvantaged, and persons of limited English speaking ability (Sec 110 a, b) and to programs to overcome sex descrimination and sex stereotyping (Sec 101). In other words, vocational education is to be judged by the employment experiences of its students, but it is to give special attention to those persons who have the most difficulty obtaining employment and, where appropriate, is to prepare students for occupations that are not traditional for their sex.

Whether vocational education can satisfy these conflicting objectives is unresolved. To the extent the field succeeds in recruiting and training persons with special needs, and trains

students for nontraditional occupations, it may reduce the probability its students will obtain employment. To the extent one objective is achieved, the other objective could become more difficult to achieve.

Compounding the uncertainty in vocational education, itself, is the general unsettled state of American society. In the past two decades our nation has been struggling to deal with a variety of social forces and problems that have caused us to question many of our basic values and conceptions of ourselves: the civil rights struggle, the women's movement, the failures in our domestic War on Poverty and our foreign war in Vietnam, Watergate, inflation, our dependency on imported oil. This is only a partial listing, still it calls into question not only our ability to manage our national affairs and to work toward common goals, but even our ability to agree upon the goals we, as a people, should work toward. It is not implied by listing these problems in the present context that vocational education can play any major role in their resolution. They are cited only to suggest the kind of social and political environment in which education is likely to operate in the coming decade.

The remainder of this chapter presents a brief overview of how an examination of these major trends as well as the other factors influencing the future of vocational education was carried out. The subsequent chapters and appendices present the procedures and results in greater detail.

Purpose of the Study

This study is being conducted to identify the major trends and possible events that could influence vocational education in the 1980s and to analyze the policy issues likely to be associated with these trends and events. This report presents the results of the first year's activities which concentrated on the identification of the trends, events, and issues.

This report is not the final product from this examination of alternative futures. It is instead a report on work in progress. During the coming year, the information presented in this report will be examined in greater detail. Those factors that appear likely to exert the greatest influence on vocational education in the 1980s will be selected for more intensive analysis. In addition, estimates will be made of the probable effects of a limited number of crucial policy decisions. The results from these analyses will then be incorporated into scenarios describing different possible futures and the sequences of events and decisions that could produce them.

Projections about the future have an inherent interest for most people. Some of the projections contained in this report, such as the changing age distribution of the population in the 1980s, can be made with a high degree of certainty. Others, such as those about public confidence in major societal institutions, are much more subject to change. All such predictions are interesting. The purpose of the present study, however, is not to entertain. Instead it is to help those who have the responsibility to set directions for vocational education to understand the forces that are likely to influence the field and the kinds of decisions that will be necessary to lead to alternative futures that are judged to be more desirable.

Overview of Report

The three main tasks carried out during the first year of this study are discussed in this report. Chapter 2 presents the procedures that were followed in each of the three tasks.

The first main task was an examination of the environment in which vocational education is likely to operate during the next fifteen years. This was conducted by the Institute for the Future under a subcontract to the National Center. The study consisted of forecasts of a number of trends that are likely to be of significance to vocational education and an analysis of the policy implications of these trends. A summary of the main findings from this study is contained in Chapter 4 and the full report is reproduced in Appendix B.

The second task was a Delphi study of possible events that, if they were to occur, could have a major impact on vocational education. An elite panel of national leaders and scholars of vocational education was recruited and asked to make various estimates of the probability and potential impact of thirty-six possible events. The results from the third round of these estimates are presented in Chapter 3.

The third task, which is discussed in Chapter 4, consisted of a conference on alternative futures for vocational education. This conference brought together vocational educators, individuals directing policy studies of vocational education, and representatives of groups that are likely to try to influence future legislation in vocational education. The participants heard and discussed reports on the subcontracted study of future trends, on the Delphi study, and on policy studies being conducted by other organizations. The participants also took part in a workshop where they attempted to describe what vocational education may look like in the 1980s from an optimistic, pessimistic, and realistic (most likely) perspective.

As was noted above, this is a report on work in progress. This report contains relatively little integration or synthesis of the information produced by the three tasks. During the second year of the study, the emphasis will be on selecting from this information those factors that appear to be most crucial to the future of vocational education and conducting an indepth analysis and integration of those factors.

CHAPTER 2

METHODOLOGY

Three main tasks were carried out for this study of alternative futures for vocational education: a Delphi study was conducted, an analysis of external trends likely to influence vocational education was subcontracted to the Institute for the Future, and a conference was convened. These three means were designed to identify the trends and events likely to influence vocational education and the policy issues which alternative futures might involve.

Delphi

Delphi is a process, a futures forecasting technique, which brings together the opinions of relevant persons in the hope of producing a consensus judgment about a specific situation. The process involves a "carefully designed program of sequential interrogations (usually best conducted by questionnaire) interspersed with information and opinion feedback" (Helmer, 1967). The group views often move towards concensus as a result of the Delphi process. Results provide the considered judgment of leadership in a field regarding the likelihood and desirability of potential events or situations.

Instrumentation

An instrument was created for this study especially to assess alternative futures of vocational education. The instrument allows projections concerning *if* an event might occur, *when* the event might occur, the *desirability* of the event, the potential *impact* of the event, and the power of vocational educators to *influence* the event. Fixed response options were provided for each type of projection. For example, in estimating if an event may occur, a panelist selected from the following responses:

An event has--

- less than 50 percent probability of occurrence,
- more than 50 percent probability of occurrence, or

- almost certain probability of occurrence.

Projections were requested about events reflecting situations that are specific in nature and often can be measured. For example, in attempting to elicit opinion regarding financing of vocational education the following event was created.

> Total dollar outlay for support of vocational education by state and local government increases by 25 percent over the 1979 level (adjusted for inflation).

The subjects around which events were created focused on those issues identified by several sources as important presently and or in the future for vocational education. Those sources include:

1. the five year planning priorities established by the U.S. Office of Education, Bureau of Adult and Occupational Education. The priorities were determined as part of a "process of developing and implementing a long range master plan based on the mission of the Bureau "and identify areas for increased federal involvement in vocational education programs (U.S. Government, 1979);

2. an article in the American Vocational Association's professional journal in which the future of vocational education is discussed from the perspective of Congress. The author is John J. Jennings, Counsel and Staff Director for the House Sub-Committee on Elementary, Secondary and Vocational Education (Jennings, 1979);

3. a presentation by Reginald Petty, Executive Director of the National Advisory Council on Vocational Education, about the trends and issues in vocational education (Petty, 1978); and

4. a presentation regarding emerging educational policy issues in Washington, D.C. by Samuel Halperin, the director of the Institute for Educational Leadership, George Washington University (Halperin, 1978).

Most of the events were designed to obtain specificity about one or more of the following subjects (issues):

1. Access
2. Special populations
3. Youth unemployment
4. Finance

5. Planning and evaluation
6. Federal role
7. Education and work
8. Coordination with other vocational education deliverers
9. Sex stereotyping
10. Lifelong learning
11. Programming

Process

The Delphi was adapted for National Center purposes to allow participants three opportunities to indicate their opinions. The administration of the instrument (by mail) on each of these three occasions was called a "round".

In the first round the participants were asked for their initial projections. This involved five projections (1. probability of occurrence, 2. probable date of occurrence, 3. desirability of the event, 4. impact upon the quality of vocational education, and 5. power of vocational educators to influence the event) for each of the thirty-six events, for a total of 180 estimations.

In the second round the median ratings from the first round were reported and the participants were asked to make second projections (for the same events) in the light of the new information. At this same time, the participants whose responses varied considerably from the medians were requested to submit a reason or justification for their responses.

In the third round the participants were given the group medians from the second round and also a summary of the justifications for those reponses which were quite different than the medians. At no time did the participants know others on the panel or what comments were attributable to any individual. In this way some of the traditional problems of group interaction were avoided, notably the bandwagon phenomenon. The third round provided the participants with a last chance for revising their opinions.

Field Test

A field test of a preliminary instrument and the process in general was conducted with twelve National Center professional personnel. This initial instrument included forty-four items. Based upon the field test results, the number of items was reduced

to thirty-six for the final version. In addition, changes were made to improve instrument readability and instructions.

Participation

Delphis are designed in most cases to obtain expert opinion on a given subject. The prime population for inclusion in this futures study, therefore, was national vocational education leadership. The individuals selected primarily represent the following areas of vocational education:

1. Administration of state vocational education programs
2. Professional development or teacher education within vocational education
3. Research and development
4. Administration and policy making

Senior staff of the National Center nominated thirty persons for involvement in the Delphi. These individuals were invited to participate and also to nominate other national leaders for participation. Twenty-five of the original thirty agreed to serve as panelists and nomimated an additional forty-eight persons. They did not receive an initial invitation letter alone; but did receive an invitation letter accompanied by the round one instrument and instructions. Therefore, the round one instrument was mailed to seventy-three people, twenty-five who had previously agreed to participate and forty-eight who had not been previously contacted about this effort.

It is assumed, that those who chose not to participate or those who completed early rounds but not the final round, do not hold substantially different views from those who completed all three rounds. This assumption is a basic weakness of all Delphis (Hencley and Yates, 1974). An analysis of those who completed round one and round three, presented in Chapter 3, indicates relatively few differences in the demographic data listed below.

Each participant was asked to complete a demographic data form along with round one of the instrument. This form elicits information concerning the following:

1. The number of years of professional experience in the practice or research of vocational education
2. Professional classification as
   1) A practitioner of vocational education

2) A scholar/researcher in vocational education

3) A scholar/researcher of vocational education

4) Other

3. Age ranges

4. Sex

Analysis

The means of analysis chosen for this Delphi were calculation of the group median and interquartile ranges for each of the 180 variables (thirty-six events with five projections each). These results facilitated feedback for the participants during the rounds and provided an effective medium for presenting the final central values. The interquartile ranges provide further information on the degree of concensus in the group. In addition, the events are ranked according to the median responses to allow comparisons.

Policy Choices for Vocational Education

In order to examine the external conditions which are likely to influence the future of vocational education, the National Center arranged for the Institute for the Future (Menlo Park, CA) to study these factors.

The Institute for the Future is a private, non-profit organization established in 1968. Primary work has been in the areas of linking futures planning to practical problems, inventing and applying new tools for looking at the future, and stimulating public awareness of the future. The change process assumptions upon which the Institute for the Future operates follow:

- The future is neither entirely foreseeable nor entirely inevitable.
- There exist alternative futures--like alternative paths in some new and unexplored territory. Each path has some possibility of being chosen. Our job as futurists is to lay out these pathways for inspection and examination.
- Choices can be made more intelligently by increasing our level of awareness of these alternatives and the consequences of choices among them.

- Finally, and possibly most important, we can exercise some influence in making desirable futures more likely and less desirable futures less likely (Amara, 1978).

Roy Amara, the President of the Institute for the Future, has published in the field of vocational education futures and has demonstrated an ongoing interest in this area.

The analysis undertaken by the Institute for the Future for the National Center focused upon the following areas:

1. Demography
2. The labor force
3. The economy
4. Societal expectations
5. Education

In general, the analysis is based upon the concept of trend extrapolation. A trend "is a tendency for the values in a time series to increase or decrease with some steady regularity" (Hill, 1978). Extrapolation involves the estimation of unknown information through the extension or projection of known information (American Heritage Dictionary, 1978).

The trends were also interpreted in the context of possible impact upon vocational education and potential policy implications for planners in vocational education.

The preliminary product of this analysis was a draft report entitled "Policy Choices for Vocational Education". This draft was submitted to the participants of the Alternative Futures for Vocational Education Conference (January, 1980). The participant's discussions revolving around the contents of this report were summarized and included in the final version. The final text may be located in Appendix B of this document.

Alternative Futures for Vocational Education Conference

The third part of the project's methodology for studying alternative futures for vocational education involved a convening of policy makers and policy influencers. The purposes of this conference were to--

1. share information regarding a number of activities which may influence the future of vocational education,

2. develop alternate views of the future of vocational education based upon participant expertise and the provided information, and

3. delineate policy issues and research and development needs of prime importance in the 1980s for vocational education.

The conference was held January 8 and 9, 1980 at the National Center for Research in Vocational Education in Columbus, Ohio.

Participation

Participation at the conference was by invitation only. Those invited are major actors in the shaping of vocational education policy or persons in a position to influence policy. For example, the Assistant Secretary of Planning and Evaluation for the Department of Health, Education, and Welfare was present, as was the director of the CETA program for the U.S. Conference of Mayors. Twelve individuals attended the conference along with a number of the senior staff members from the National Center.

Activities

Although each of the participants is an expert in his or her own right, a common base of understanding was desired to structure discussion throughout the meeting. The first presentation was that of Gregory Schmid outlining the results of the Institute for the Future study. The group received a copy of the document prior to the conference so that they might be prepared to interact.

The second block of time was devoted to a panel presentation. The panel members all spoke to current efforts with which they are familiar that may affect the future of vocational education. The panel members follow:

1. Dean Griffin of the American Vocational Association

2. Henry David of the National Institute of Education, Vocational Education Study

3. Michael O'Keefe of the Office of Planning and Evaluation, Department of Health, Education, and Welfare

Thomas Glynn, Director of the Vice-President's Task Force on Youth Employment, was scheduled to be a fourth member of the panel but was unable to attend. Time was allotted for the group to ask questions of each of the speakers.

The third primary activity was the presentation of the preliminary results from the Delphi study. Although the data could not be considered in a final form, the essence of the research was communicated.

The participants were organized in three working groups for most of the second day. Their task was to describe alternative futures for vocational education. The groups responded to the following questions within the context of a most likely environment, a pessimistic environment, or an optimistic environment:

1. What will be the major influences and considerations that will shape vocational education in the 1980s?

2. What will be the probable federal roles in vocational education?

3. What are the implications of these probable federal roles on state and local roles in vocational education?

4. What are the probable changes in the roles and interrelationships of different training agencies?

5. What would be the effects of these probable changes upon the groups to be served?

At the conclusion of the meeting, all participants were requested to submit a list of the major policy issues and major research and development needs for vocational education in the 1980s.

CHAPTER 3

DELPHI--THE EXPERTS MAKE PROJECTIONS

Introduction

The term Delphi is from ancient Greece. Delphi was the site where the gods transmitted their forecasts of the future to the temple priests (Linstone, 1978). Although the participants of the National Center's Delphi do not have omnifarious knowledge, they do constitute a significant group of individuals providing leadership within vocational education. In that sense, they are well qualified to provide estimations and educated guesses concerning the future of vocational education. If the results are not considered indicative of what will happen in the future for vocational education, they are at least indicative of what leadership in the field thinks will happen, which is important in and of itself.

Because of the structure of the Delphi instrumentation, participants could not expound freely on any subject related to the future of vocational education, only to those subjects discussed via a specific event. Therefore, they may hold strong views about some possible occurrence which was not included in the listing of events, and in that sense their views remain untapped. Nevertheless, they were allowed to react to thirty-six events about a wide range of areas relevant to vocational education.

To facilitate comprehension of the results, the thirty-six events have been categorized loosely into four grouping issues:

1) access

2) linkages

3) accountability

4) program

There is overlap into two or more categories by some of the events, but this post-facto grouping allows easier comparisons of the data. The events were not organized by grouping on the actual Delphi instrument, however, much of the data within this chapter will be presented according to the four categories.

In order to analyze the results of the Delphi, the medians and interquartile ranges for the panelists responses to round three were calculated. This data will be provided along with the rankings of the median responses. A discussion of the highlights of the data and events which elicited more interesting responses will be included also.

Participation

Fifty-five persons completed round one of the Delphi. Thirty-nine of those people continued through rounds two and three. The attrition rate was 29 percent. Table 3.1 presents the demographic data for the participants of rounds one and three. Participants who completed all three rounds were offered twenty-five dollars honorary compensation. Although this amount was small, it was thought that the payment might increase the completion rate.

Median Scores and Ranks

In order to calculate the group medians for each of the 180 variables (thirty-six events, five projections each), numerical values were assigned to the response options. For example, in predicting the probability of an event's occurrence one could choose between three options:

Probability Options	Value Assignment
Less than 50%	1
More than 50%	2
Almost certain	3

The medians and interquartile scores (25, 50 and 75 percent) were computed as if the data were interval in nature, although this is not the case for all of the five projection categories (probability, date, desirability, impact, influence). Tabel 3.2 presents the median score for the round three data for each of the 180 variables and a ranking within each of the five projection categories. Although the thirty-six events are organized by the four issue groupings (access, linkages, accountability, program), the ranking is in terms of all thirty-six events. Table 3.2 and the remainder of the tables within this chapter may be located at the end of the chapter (p. 27).

By examining the rankings in Table 3.2, one can see which events are considered most and least likely to occur, most and least desirable, and so on. It is, however, important to examine

TABLE 3.1

DEMOGRAPHIC DATA - DELPHI PARTICIPANTS

Question	Round One N=55	Round Three N=39
1. What is the number of years of professional experience you have in the practice or research of vocational education?	17.23 mean years	17.72 mean years
2. How would you describe yourself?		
• a practitioner of vocational education	38.46%	30.77%
• a scholar/researcher in vocational education	15.38	20.52
• a scholar/researcher of vocational education	28.85	30.77
• other	17.31	17.95
3. What is your age group?		
• 30 or less	2.92%	2.57%
• 31 - 40	23.08	23.08
• 41 - 50	32.69	41.03
• 50 +	42.31	33.34
4. Sex		
• male	82.63%	87.18%
• female	16.36	12.82

the responses for an event across all five projection categories. Following is a listing of events which ranked high and low for the Delphi. (See Table 3.2 for the exact wording and medians for each event.) The events are numbered alphabetically within the four categories. Therefore, access events are numbered I-A through I-J. Linkages events are numbered II-A through II-L. Accountability events are numbered III-A through III-E, and program events are numbered IV-A through IV-I.

Events Which Ranked High on the Probability of Occurrence Projection

II-L Schools enter into cooperative agreements with business, industry, and labor.

IV-E Vocational education is primarily competency based.

I-A Federal subsidies are available for training instructors of special needs students.

III-E Tax credits are available to employers for training of employees.

II-E Thirty percent of those over age sixty-five remain in the workforce.

II-G Postsecondary vocational education credit for technical courses is accepted for transfer by many four year institutions.

III-B Federal funding for CETA and Job Corps increases by twenty-five percent.

Events Which Ranked Low on the Probability of Occurrence Projection

II-B Institutional training programs of CETA are transferred to the Department of Education.

II-F Completion of a two year vocational education program is necessary to enter the primary labor market.

III-D Vocational education policy making is highly decentralized.

II-C The number of apprenticeship positions nationally doubles.

IV-G Seventy-five percent of secondary vocational education graduates go on immediately to postsecondary vocational education.

Events Which Ranked Low on the Probable Date Projection (Likely to occur pre 1985)

I-A Federal subsidies are available for training instructors of special needs students.

III-B Federal funding for CETA and Job Corps increases by 25 percent.

III-C Federal funding for vocational education is tied to specific measurable criteria.

II-L Schools enter into cooperative agreements with business, industry, and labor

I-J Many postsecondary vocational education programs are scheduled evenings and weekends.

III-A State and local dollars for vocational education increases by 25 percent.

Events Which Ranked High on the Probable Date Projection (likely to occur either later or never)

II-F Completion of a two year vocational education program is necessary to enter the primary labor market.

II-J Thirty percent of all senior management positions in the labor force are held by minorities and women.

Events Which Ranked High on Desirability

II-L Schools enter into cooperative agreements with business, industry, and labor.

II-K Many employers will redesign work settings to match the abilities of special needs workers.

II-A The declining birth rate reduces the youth unemployment problem.

IV-F Minimum competencies in vocational education are required for graduation in 25 percent of the states.

IV-E Vocational education is primarily competency based.

Events Which Ranked Low on Desirability

II-D Productivity of the American worker declines to zero growth.

II-F Completion of a two year vocational education program is necessary to enter the primary labor market.

I-B Fifty percent of federal funding for vocational education is targeted for special needs populations.

Everts Which Ranked High on Potential Impact (upon the quality of vocational education)

II-L Schools enter into cooperative agreements with business, industry, and labor.

IV-E Vocational education is primarily competency based.

IV-A More than 50 percent of federal funding is tied to training for changing and emerging occupations.

I-H Most students have access to vocational programs representing all career clusters.

IV-F Minimum competencies in vocational education are required for graduation in 25 percent of the states.

IV-C Secondary vocational education is exploratory in nature.

Events Which Ranked Low on Potential Impact (upon the quality of vocational education)

II-E Thirty percent of those over age sixty-five remain in the work force.

II-D Productivity of the American worker declines to zero growth.

II-J Thirty percent of all senior management positions in the labor force are held by minorities and women.

Events Which Ranked High on Vocational Educator's Power to Influence

IV-E Vocational education is primarily competency based.

I-H Most students have access to vocational programs representing all career clusters.

IV-C Secondary vocational education is exploratory in nature.

IV-I Instruction in energy conservation is 25 percent of course content in preparation for related fields.

Events Which Ranked Low on Vocational Educator's Power to Influence

II-A The declining birth rate reduces the youth unemployment problem.

II-E Thirty percent of those over age sixty-five remain in the labor force.

II-I Most married women work.

II-K Many employers redesign work settings to match the abilities of special needs workers.

II-D Productivity of the American worker declines to zero growth.

The results can also be considered within the access, linkages, accountability and program groupings.

Access Events

The access grouping contains events which deal with concerns such as the availability and appropriateness of vocational education programs for special needs populations, sex equity, the changing age distribution of students, and the range of programs representing different career areas. A graphic display of the medians and interquartile ranges for the events within the access grouping is presented in Table 3.3.

One of the events noted in Table 3.3 which is projected to occur before 1985 and is rated as being highly desirable, refers to the availability of federal subsidies for training of instructors who work with special needs populations.

The event concerning 80 percent of students having access to vocational programs representing all career clusters was rated as--

1. highly desirable,
2. within the realm of vocational educator's influence, and
3. potentially having great impact upon the quality of vocational education.

The other access events that participants felt vocational educators are most able to influence are--

1. mainstreaming of special needs students, and

2. providing evening and weekend programs to accommodate working students.

The possibility of enrollment increases at the postsecondary level of vocational education was thought to be desirable, and one which would have great impact upon the quality of vocational education if it were to be realized. It was felt to be an event over which vocational educators have moderate influence.

Linkages Events

The Delphi events which have been categorized as dealing specifically with linkages concern the connections between vocational education programs and external organizations, programs, or phenomenon. For example, does vocational education have a direct relationship with youth unemployment or the productivity of the American worker? Or, how do vocational education programs coordinate with the business world or CETA?

Table 3.4 provides linkage events medians and interquartile ranges.

Several linkage events were felt to be outside of the control of vocational educators, for example:

1. Seventy-five percent of married women are in the labor force.

2. Thirty percent of those sixty-five and older remain in the labor force.

3. Youth unemployment declines.

4. Employers redesign work settings for special needs workers.

These same events were not expected to have a great impact upon the quality of vocational education, if they should occur.

One linkage event over which the participants felt vocational educators do have great control, is the development of cooperative agreements between vocational education institutions and business-industry. This same event was felt to be quite probable, highly desirable, and one which would have great impact upon vocational education.

Another linkage event which was felt to be both highly desirable and probable related to four year postsecondary institutions accepting credit for technical courses taken at two year colleges.

The possibility of a two year degree being a necessary entrance requirement to the primary labor force was felt by the participants to be--

1. undesirable,
2. unlikely to happen, and
3. potentially having great impact, if it were to happen.

Accountability Events

Five of the events within the Delphi have to do with financial, planning, and evaluation issues. Potential funding increases and the changing locus of decision making are examples of specific types of events within the accountability grouping.

Table 3.5 provides the medians and interquartile ranges for each of the variables of the accountability events.

The Delphi participants felt that vocational educators have a moderate degree of influence over the following events:

1. CETA and Job Corps funding increasing by 25 percent
2. Federal vocational education funding being tied to national measurable criteria
3. Policy making being decentralized within vocational education
4. Employers becoming eligible for tax credits for training employees

The accountability events which were rated as likely to have impact upon the quality of vocational education if they were to occur, related to the development of national measurable criteria that would determine federal funding, and to the decentralization of policy making for vocational education.

The Delphi participants thought the following accountability events were most likely to occur:

1) CETA and Job Corps funding increases by 25 percent,

2) federal vocational education funding is tied to national measurable criteria, and

3) employers are eligible for tax credits for training employees.

Program Events

Any events which are about curriculum content, methodology or standards were categorized in the program grouping. For example, one event relates to instruction on energy conservation techniques, another relates to competency based curriculum.

Table 3.6 is a graphic display of the medians and interquartile ranges for the program events.

The program events which the Delphi participants thought were likely to become reality are as follows:

1. Enterpreneurship programs are available at 50 percent of all postsecondary vocational sites.

2. Vocational education is primarily competency based.

3. Instruction in energy conservation occupies 25 percent of course content in preparation for related fields.

These same three events were seen as being desirable. Another event which was rated as being desirable dealt with minimum competency standards for graduation being instituted within 25 percent of the states. All four of the above mentioned events were thought to fall within the realm of vocational educator's influence and power.

A number of program events were rated by the Delphi participants as potentially having a great impact upon the quality of vocational education if they should occur. They include the following:

1. Fifty percent of federal funding is tied to training for new and changing occupations.

2. Secondary vocational education is primarily exploratory in nature.

3. Vocational education is primarily competency based.

4. Minimum competencies for graduation are instituted in 25 percent of the states.

5. Seventy-five percent of secondary vocational education graduates go on immediately to postsecondary vocational education.

6. Twenty-five percent of postsecondary vocational education programs may be completed through school-to-home electronic media and on-site work experience.

The events over which the Delphi participants felt vocational educators had the greatest influence included--

1. secondary vocational education is exploratory in nature,

2. vocational education is primarily competency based,

3. minimum competencies for graduation are instituted in 25 percent of the states, and

4. instruction in energy conservation occupies 25 percent of course content in preparation for related fields.

Summary

Further study of the implications of the Delphi findings will continue in the second year of the project. However, even at this first stage of analysis one can see that professional vocational educators do not all think alike. Not one of the 180 variables achieved a consensus response. Neither was any event seen to be "almost certain" in probability of occurrence. None of the events were expected by the group to occur during 1980 or 1981, even when some of the participants felt that the event described was currently the situation.

The events which stand out in the results, or which consistently ranked near the top or bottom on more than one of the five projection categories (probability, data, desirability, impact, and power to influence) follow:

II-L Schools enter into cooperative agreements with business, industry, and labor.

- Is likely to occur
- Will occur soon
- Will have great impact
- Is highly desirable

IV-E Vocational education is primarily competency based.

- Is likely to occur
- Is within vocational educators power to influence
- Will have great impact
- Is highly desirable

I-A Federal subsidies are available for training instructors of special needs students.

- Is likely to occur
- Will occur soon

II-K Many employers will redesign work settings to match the abilities of special needs workers.

- Is desirable
- Is not within the power of vocational educators to influence

II-D Productivity of the American workers declines to zero growth.

- Is undesirable
- Will have little impact (upon vocational education)
- Is not within the power of vocational educators to influence

II-A The declining birth rate reduces the youth unemployment problem.

- Is highly desirable
- Is not within the power of vocational educators to influence

TABLE 3.2

DELPHI RESPONSES (ROUND THREE) -- MEDIANS AND RANK

N=39 Ranks are from 1-36 in descending order. Medians are based on values as indicated below.

Provide your estimate in each column for the events below	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
ACCESS EVENTS	Median		Rank	Median				Rank		Median		Rank			Median		Rank	Median		Rank
I-A Special federal subsidies are available to support specialized training needs of instructors of special needs students (e.g., handicapped, disadvantaged).	1.95		3	2.05				36		1.31		30	1.85		22.5			1.93		24
I-B More than 50% of federal funding for vocational education is targeted for special needs populations.	1.13		29.5	3.03				30		3.90		3	1.88		20			1.98		22
I-C Thirty percent of adult education students are over the age of 55 (current rate 14%).	1.20		25.5	3.71				10		2.17		12	1.92		17.5			2.15		8
I-D Enrollment in most vocational education programs reflect the percentage of distribution within the population by gender, handicap and race.	1.20		25.5	3.97				8		1.89		22	1.96		11			1.91		28

TABLE 3.2

DELPHI RESPONSES (ROUND THREE) -- MEDIANS AND RANK

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Provide your estimate in each column for the events below	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
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	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
ACCESS EVENTS	Median		Rank	Median			Rank			Median		Rank			Median		Rank	Median		Rank
I-E More than 75% of the enrollees in two year postsecondary vocational education programs are thirty years of age or older (current rate, 50%).	1.81		10.5	3.21			21.5			2.41		7	1.93		15.5			2.13		10
I-F Native tongue vocational education is available for students with need.	1.13		29.5	4.26			4			2.28		9	2.02		9			1.94		23
I-G Eighty percent of vocational education students with special needs are mainstreamed within existing programs.	1.65		16	3.22			20			2.05		16	1.88		20			1.72		29
I-H Eighty percent of all students have access to vocational programs representing all career clusters.	1.67		15	3.30			18			1.39		28.9	1.22		33			1.22		35

TABLE 3.2

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	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
ACCESS EVENTS	Median		Rank	Median				Rank		Median		Rank			Median		Rank	Median		Rank
I-I The number of persons entering two year postsecondary vocational education programs increases by 50% over 1979 enrollment.	1.70		13.5	3.31			16.5			2.00		19.5	1.39		27			2.03		16
I-J Over 75% of two year postsecondary vocational education programs are scheduled for evenings and weekends to accommodate students with full time jobs.	1.13		29.5	3.26			19			1.97		21	1.92		17.5			1.50		31

29

TABLE 3.2

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	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
LINKAGE EVENTS	Median		Rank	Median				Rank		Median		Rank		Median	Rank			Median		Rank
II-A The declining birth rate significantly reduces (more than 50%) the youth unemployment problem.	1.22		23.5	3.39			11.5			1.18		34		2.11	7			2.91		1
II-B Institutional training programs currently conducted under 1979 CETA Amendments are transferred to the Department of Education.	1.04		36	3.21			21.5			1.70		24		1.45	26			2.08		11.5
II-C The number of apprenticeship positions available nationally doubles over 1979 figures.	1.09		33	3.92			9			2.00		19.5		1.94	13.5			2.17		7
II-D The productivity rate of the American worker declines to a zero growth level (since 1973 the annual rate of growth has dropped from 3% to 1.3%).	1.23		22	3.04			28.5			4.94		1		2.19	2			2.26		5

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LINKAGE EVENTS	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
	Median		Rank	Median				Rank		Median		Rank			Median		Rank	Median		Rank
II-E Thirty percent of all persons over the age of sixty-five remain within the labor force (current rate, 12%).	1.91		5	3.38			13			2.36		8	2.22		1			2.35		2
II-F Successful completion of two year postsecondary vocational education is the minimal prerequisite for job entry and re-employment in the primary labor market.	1.06		34.5	5.08			1			4.0		2	1.36		28			2.08		11.5
II-G Two year postsecondary vocational education credit for technical courses is accepted as transfer credit by more than 50% of the four year postsecondary institutions.	1.90		6	3.10			26			1.50		25.5	1.85		22.5			2.03		16
II-H Over 50% of all mid career changes for adults involve participation in a formal vocational education program.	1.15		27	4.11			6			2.02		17.5	1.93		15.5			2.02		19.5

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	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
LINKAGE EVENTS	Median		Rank	Median				Rank		Median		Rank		Median	Rank			Median		Rank
II-I Over 75% of married women who live with a husband are in the labor force (current rate, 50%).	1.84		9	3.33			15			2.82		4		2.13	5			2.31		3
II-J Thirty percent of all senior management positions in the labor force are held by minorities and women (current rate, 10%).	1.61		17.5	4.77			2			1.84		23		2.15	3			2.21		6
II-K Fifty percent of employers with more than 300 employees redesign work settings to match the abilities of special needs workers.	1.25		21	4.03			7			1.13		35		2.13	5			2.27		4
II-L Schools enter into cooperative agreements with business, industry, labor and other organizations to provide personnel and/or facilities for educational programs for employed individuals.	2.13		1	2.39			33			1.07		36		1.11	36			1.39		32

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ACCOUNTABILITY EVENTS	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
	Median		Rank	Median			Rank			Median		Rank			Median		Rank	Median		Rank
III-A Total dollar outlay for support of vocational education by state and local government increases by 25% over the 1979 level (adjusted for inflation).	1.70		13.5	2.40			32			1.26		31			1.94		13.5	1.90		27
III-B Federal funding for the support of Job Corps and CETA-type programs increases by 25% over the 1979 level (adjusted for inflation).	1.88		7	2.21			35			2.77		5			2.13		5	2.14		9
III-C Federal funding for vocational education is tied to specific measureable criteria established at the national level.	1.81		10.5	2.28			34			2.13		14			1.33		29	2.02		19.5
III-D Policy making for vocational education is highly de-centralized with federal government officials having less impact on state decision making than in 1979.	1.06		34.5	3.31			16.5			2.07		15			1.75		24	2.03		16

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ACCOUNTABILITY EVENTS	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
	Median		Rank	Median				Rank		Median		Rank			Median		Rank	Median		Rank
III-E Special tax credits are available to employers to pay for continuing education of employees at the work site.	1.93		4	3.07			27			1.39		28.9			1.95		12	2.04		14

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PROGRAM EVENTS	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
	Median		Rank	Median			Rank			Median		Rank			Median		Rank	Median		Rank
IV-A More than 50% of federal funding is tied to training for changing and emerging occupations, many of which did not exist prior to 1970.	1.13		29.5	3.39			11.5			2.18		11			1.21		34	2.02		19.5
IV-B Entrepreneurship programs are available at 50% of all sites offering postsecondary vocational/ technical education.	1.87		8	3.04			28.5			1.50		25.5			1.88		20	1.92		25
IV-C Secondary vocational education programs are exploratory in nature, heavily emphasizing the work ethic and career options.	1.33		20	3.11			25			2.26		10			1.27		31	1.26		34
IV-D Credit for life experience (not measured by standardized tests) is awarded by more than 50% of all two and four year postsecondary institutions (current rate, less than half this percentage).	1.22		23.5	3.35			14			2.16		16			2.02		9	2.02		19.5

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PROGRAM EVENTS	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
	Median		Rank	Median				Rank		Median		Rank			Median	Rank		Median		Rank
IV-E Vocational education is primarily competency-based with curriculum built upon identified work competencies.	2.03		2	3.00		31				1.25		32.5			1.15	35		1.13		36
IV-F Minimum competencies in vocational education are required for graduation in 25% of the states.	1.61		17.5	3.13		24				1.25		32.5			1.26	32		1.69		30
IV-G Seventy-five percent of secondary school vocational education graduates go on immediately to two year post-secondary vocational education.	1.11		32	4.35		3				2.56		6			1.47	25		2.07		13
IV-H Twenty-five percent of postsecondary vocational education programs may be completed through a combination of school-to-home electronic media and on-site work experience.	1.35		19	4.16		5				2.02		17.5			1.28	30		1.91		26

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PROGRAM EVENTS	1	2	3	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2	3
	Median		Rank	Median			Rank			Median		Rank			Median	Rank		Median		Rank
IV-I Instruction in energy conservation techniques occupies 25% of course content in program preparation for occupations related to the use of energy (currently at or near zero).	1.78		12	3.17			23			1.47		27	2.02		9			1.35		33

TABLE 3.3

ACCESS EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
I-A Special federal subsidies are available to support specialized training needs of instructors of special needs students (e.g., handicapped, disadvantaged).																				
I-B More than 50% of federal funding for vocational education is targeted for special needs populations.																				
I-C Thirty percent of adult education students are over the age of 55 (current rate 14%).																				
I-D Enrollment in most vocational education programs reflect the percentage of distribution within the population by gender, handicap and race.																				

TABLE 3.3 continued

ACCESS EVENTS
MEDIANS AND INTERQUARTILE RANGES

	Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
		Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
		Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
I-E	More than 75% of the enrollees in two year postsecondary vocational education programs are thirty years of age or older (current rate, 50%).																				
I-F	Native tongue vocational education is available for students with need.																				
I-G	Eighty percent of vocational education students with special needs are mainstreamed within existing programs.																				
I-H	Eighty percent of all students have access to vocational programs representing all career clusters.																				

TABLE 3.3 continued

ACCESS EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
I-I The number of persons entering two year postsecondary vocational education programs increases by 50% over 1979 enrollment.		⊢⊣				⊢⊣	⊢⊣				⊢⊣				⊢⊣				⊢⊣	
I-J Over 75% of two year postsecondary vocational education programs are scheduled for evenings and weekends to accommodate students with full-time jobs.	⊢⊣	⊢⊣				⊢⊣	⊢⊣			⊢⊣	⊢⊣					⊢⊣		⊢⊣		

TABLE 3.4

LINKAGE EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1: Probability of Occurrence			Column 2: Probable Date of Occurrence						Column 3: Desirability of the Events					Column 4: Impact Upon the Quality of Vocational Education			Column 5: Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
II-A The declining birth rate significantly reduces (more than 50%) the youth unemployment problem.																				
II-B Institutional training programs currently conducted under 1979 CETA Amendments are transferred to the Department of Education.																				
II-C The number of apprenticeship positions available nationally doubles over 1979 figures.																				
II-D The productivity rate of the American worker declines to a zero growth level (since 1973 the annual rate of growth has dropped from 3% to 1.3%).																				

TABLE 3.4 continued

LINKAGE EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
II-E Thirty percent of all persons over the age of sixty-five remain within the labor force (current rate, 12%).																				
II-F Successful completion of two year postsecondary vocational education is the minimal prerequisite for job entry and re-employment in the primary labor market.																				
II-G Two year postsecondary vocational education credit for technical courses is accepted as transfer credit by more than 50% of the four year postsecondary institutions.																				
II-H Over 50% of all mid career changes for adults involve participation in a formal vocational education program.																				

TABLE 3.4 continued

LINKAGE EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
II-I Over 75%of married women who live with a husband are in the labor force (current rate, 50%).																				
II-J Thirty percent of all senior management positions in the labor force are held by minorities and women (current rate, 10%).																				
II-K Fifty percent of employers with more than 300 employees redesign work settings to match the abilities of special needs workers.																				
II-L Schools enter into cooperative agreements with business, industry, labor and other organizations to provide personnel and/or facilities for educational programs for employed individuals.																				

TABLE 3.5

ACCOUNTABILITY EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
III-A Total dollar outlay for support of vocational education by state and local government increases by 25% over the 1979 level (adjusted for inflation).																				
III-B Federal funding for the support of Job Corps and CETA-type programs increases by 25% over the 1979 level (adjusted for inflation).																				
III-C Federal funding for vocational education is tied to specific measureable criteria established at the national level.																				
III-D Policy making for vocational education is highly de-centralized with federal government officials having less impact on state decision making than in 1979.																				

TABLE 3.5 continued

ACCOUNTABILITY EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
III-E Special tax credits are available to employers to pay for continuing education of employees at the work site.		⊢+⊣				⊢+⊣				⊢+⊣						⊢+⊣			⊢+⊣	

TABLE 3.6
PROGRAM EVENTS
MEDIANS AND INTERQUARTILE RANGES

	Provide your estimate in each column for the events below	Column 1: Probability of Occurrence			Column 2: Probable Date of Occurrence						Column 3: Desirability of the Events					Column 4: Impact Upon the Quality of Vocational Education			Column 5: Power of Vocational Educators to Influence the Event		
		Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
IV-A	More than 50% of federal funding is tied to training for changing and emerging occupations, many of which did not exist prior to 1970.																				
IV-B	Entrepreneurship programs are available at 50% of all sites offering postsecondary vocational/technical education.																				
IV-C	Secondary vocational education programs are exploratory in nature, heavily emphasizing the work ethic and career options.																				
IV-D	Credit for life experience (not measured by standardized tests) is awarded by more than 50% of all two and four year postsecondary institutions (current rate, less than half this percentage).																				

TABLE 3.6 continued

PROGRAM EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
IV-E Vocational education is primarily competency-based with curriculum built upon identified work competencies.																				
IV-F Minimum competencies in vocational education are required for graduation in 25% of the states.																				
IV-G Seventy-five percent of secondary school vocational education graduates go on immediately to two year postsecondary vocational education.																				
IV-H Twenty-five percent of postsecondary vocational education programs may be completed through a combination of school-to-home electronic media and on-site work experience.																				

TABLE 3.6 continued

PROGRAM EVENTS
MEDIANS AND INTERQUARTILE RANGES

Provide your estimate in each column for the events below	Column 1			Column 2						Column 3					Column 4			Column 5		
	Probability of Occurrence			Probable Date of Occurrence						Desirability of the Events					Impact Upon the Quality of Vocational Education			Power of Vocational Educators to Influence the Event		
	Less Than 50%	More Than 50%	Almost Certain	1980-81	1982-84	1985-89	1990-95	Later	Never	High Desirable	Moderate Desirable	Neutral	Moderate Undesirable	High Undesirable	Great	Moderate	None	Great	Moderate	None
IV-I Instruction in energy conservation techniques occupies 25% of course content in program preparation for occupations related to the use of energy (currently at or near zero).																				

CHAPTER 4

CONFERENCE ON ALTERNATIVE FUTURES

This chapter is a summary of the Conference on Alternative Futures for Vocational Education which was held at the National Center for Research in Vocational Education on January 8 and 9, 1980. The chapter is organized into an overview of the proceedings of the conference and summaries of the major presentations and discussions.

All proceedings of the conference were taped and transcribed and this transcription was used in the preparation of this chapter. The chapter does not, however, represent a literal record of the conference. Instead, it is an attempt to identify and report recurring themes and policy issues that were raised at the conference. As such, it represents one analyst's attempt to abstract and integrate a great deal of rich and diverse data. The themes reported in this chapter might have been slightly different had another individual summarized the information. Hopefully, however, they do reflect most of the major topics discussed at the conference.

Overview

There were three main objectives of the alternative futures conference. The first was to share information regarding a number of activities which may influence the future of vocational education. The second was to collect opinions of the participants regarding possible futures for vocational education. The third was to identify and clarify policy issues and research and development needs that are likely to be of prime importance to vocational education in the 1980s.

The participants who were invited to attend the conference were selected because they could help to achieve these objectives. Some were invited because they are directing policy studies that will be considered in the reauthorization of vocational education. Others were invited because they represented various constituencies who will try to influence the direction of the legislation. Still others were invited because of their expertise in educational policy and futures research. In addition to the invited

participants, members of the project staff, several senior researchers, and most of the management of the National Center took part. A list of the participants is included as Appendix A.

The first day of the conference was primarily devoted to three presentations and to discussion of these. The first was by Gregory Schmid on the report "Policy Choices in Vocational Education" which was prepared by the Institute for the Future under a subcontract with the National Center. The second was a panel which included Henry David, director of the Congressionally mandated study of vocational education being conducted by the National Institute of Education; Michael O'Keefe, Assistant Secretary for Planning and Evaluation, Department of Health, Education, and Welfare; and Dean Griffin, director of government relations, American Vocational Association. The third presentation was by two members of the project staff, Samuel Goldman and Jill Russell on the Delphi study of alternative futures for vocational education.

Following dinner on the first day, Sandra Porter, Mary Allen Jolly, Roger Yarrington and Michael Brown were asked to speak briefly on their reactions to the first day's proceeding. These speakers represented, respectively, the National Commission on Working Women, Trident Technical College, American Association of Community and Junior Colleges, and U.S. Conference of Mayors, CETA-Vocational Education program.

The second day of the conference, all participants were assigned to workshops. There were three separate groups and each was asked to answer a set of five questions about vocational education in the 1980s (Table 4.1). Each of the groups, however, was asked to adopt a different perspective. The first was asked to adopt an optimistic perspective. If things go well, what will vocational education look like in the 1980s? The second was asked to adopt a realistic or most likely perspective. And the third was asked to adopt a pessimistic perspective.

When these groups finished their deliberations, the total group reconvened, heard reports from the three workshops, and reacted to the reports. To close the conference, participants were asked to write down and turn in the three major policy issues and the three major research questions which they saw facing vocational education in the 1980s.

The remainder of this chapter presents summaries of the main presentations and discussions in the same order as they occurred during the conference. In many cases the presentation and discussion were interspersed. In this chapter, however, they are summarized separately.

TABLE 4.1

WORKSHOP QUESTIONS

1. What will be the major influences and considerations that will shape vocational education in the 1980s?

2. What will be the probable federal roles in vocational education?

3. What are the implications of these probable federal roles on state and local roles in vocational education?

4. What are the probable changes in the roles and interrelationships of different training organizations?

5. What would be the effects of these probable changes upon the groups to be served?

Policy Choices in Vocational Education

Under a subcontract to the National Center, The Institute for the Future was asked to describe the likely environment in which vocational education will operate in the period 1980 to 1995 and the policy implications of this environment. Gregory Schmid, directed the work on this project and presented an overview of the major results to the conference. (The following summary is based on the transcription of Dr. Schmid's remarks. All of the points raised here are discussed in greater detail in the report prepared by the Institute for the Future which is reproduced as Appendix B.)

The cornerstone of the Institute's projections for the remainder of this century is the changing age distribution of the population, primarily caused by the aging of the baby boom of 1945 to 1965. In the 1960s and 1970s the children of this boom moved through secondary and postsecondary institutions in unprecedented numbers and entered the labor force. Their entry was accompanied by an equally unprecedented number of women who chose to remain in or re-enter the labor force. The result of these two trends was a vast increase in the number of people seeking work. Therefore, labor was relatively cheap during this period compared to capital, and according to the Institute's analysis, employers substituted labor for capital. This substitution explains the decline in capital investment during the 1970s and the concomitant decline in productivity.

In the 1980s the Institute predicts an actual decrease of about one percent per year in the number of young entrants into the labor force. There will be fewer young people, and women will not be entering at the same rate as in the 1960s and 1970s. The Institute thus projects that labor will become relatively expensive compared to capital, there will be more investment in capital equipment, and productivity will begin to rise again. (Some of the assumptions in this analysis were questioned by participants. The questions that were raised are presented in the next section.)

During the 1980s, the Institute for the Future expects inflation to average about 8 percent a year. This expectation arises primarily from the political pressure the middle class is exerting to control inflation. The inability of government to control the economy as well as the failure of a number of domestic and foreign policies have led to a loss of confidence in government as a problem solver. The mood of the country has become increasingly conservative in fiscal matters, and this has led to initiatives such as Proposition 13 in California and an overall decrease in government expenditures at all three levels, local, state, and national, as a percentage of the gross national product.

Along with the general decline of confidence in government, is a similar decline in confidence in public education. Government cannot seem to solve social problems, and public education cannot seem to teach basic literacy skills. This is reflected most dramatically in the drop in achievement test scores which has been continuing since the mid 1960s.

The smaller number of young people at secondary level, the fiscal conservatism of the country, and the decline of confidence in public education seem to the Institute to point to a much different climate for education in the 1980s. Education must change its expectations from growth to an actual decline in the share of the gross national product which it receives.

Vocational education, in particular, can expect a slower rate of growth than it experienced in the 1970s. There will probably be an actual drop in the number of students in the traditional sixteen to twenty-four age range, but increases are likely in the number of students twenty-four and older. Most of this increase will be seen in community colleges which should experience an enrollment growth of about 25 percent by 1995.

From this general analysis of the probable environment in the 1980s, the Institute for the Future drew conclusions about nine phenomonon that have major implications for vocational education:

1. Increased capital investment and expansion of high technology.

2. Decreases in the number of traditional students, particularly those in the sixteen to twenty-four age range.

3. Increases in new groups, especially young adults age thirty-five and older and women re-entering the labor force or holding part-time jobs.

4. Increased numbers of educationally disadvantaged who require remedial programs.

5. Declining ability in reading and computation skills among all students.

6. A larger proportion of minority group students at all levels.

7. Declining levels of public support.

8. Increased competition for potential students from other training sources, especially the military services and business and industry.

9. Curriculum adjustments to accommodate new technologies and characteristics of students.

Discussion

In the course of Dr. Schmid's presentation, a number of questions and comments were raised. These are summarized by the topic which they addressed.

There were some criticisms of the basic tone of the presentation as too conservative and pessimistic. This was perhaps best reflected in comments to the effect:

> So what if there are fewer students at the secondary level. That just means teachers will have a few less students in their classes or some secondary teachers will be teaching at the postsecondary or adult level.

On the other hand, some participants noted that the economic environment for education is likely to be even more dismal than the Institute report projected. In addition to the increasing fiscal conservatism of a large majority of the population and the decline of confidence in education, there will be many other competitors for public expenditures. Prominent among these will be the repair of the infrastructure--roads, bridges, water and sewer systems--and the unfunded pension obligations of many local and state governments. In addition, fewer children mean there are fewer parents, which means fewer voters with a stake in the school system.

The specific assumption in the Institute's analysis that drew the most questions was the trade off between capital and labor and the effect this had on productivity in the 1970s and will have in the 1980s. This was criticized on essentially three grounds. First it assumed a high degree of rational behavior on the part of employers. Second, it is a macro-analysis that breaks down when specific sectors of the economy are examined. This is especially true of the service sectors which have experienced the largest growth in employment and where the measures of productivity are weakest. The third point is that the arguments attribute all increases in productivity to substitution of capital for labor and neglects the contribution that human resources make to productivity.

Another comment was that the Institute's report tends to ignore the political processes that shape educational policies. This was made in reference to the projected increase in community college enrollments. Changes in the age distribution of the population and in patterns of labor force behavior may suggest such an increase. One participant noted, however, that there does not appear to be an awareness of these changes among the state legislators who determine the policies under which community colleges operate.

Another participant noted that there is no organized pressure group to articulate the needs of adult learners. This was countered, however, by the comment that postsecondary institutions, both at the two and four year level, are doing their best to recruit adult learners, because their continued existance depends upon new sources of students.

Policy Panel

The policy panel consisted of Henry David, Michael O'Keefe, and Dean Griffin. Thomas Glynn of the President's Domestic Policy Staff had also been scheduled to take part, but was unable to attend.

Henry David

Dr. David opened his remarks by describing some of the specific future-oriented work that his study is conducting. The first effort is an attempt to get some understanding of the demands in the labor market that are likely to be served by individuals who acquire occupational skills up to the baccalaurate degree level. Combined with this is an examination of human development policy which would actually attempt to carry out the wide promise of opportunity contained in the purpose of the vocational education legislation.

The second NIE effort is an attempt to understand how those who have the responsibility to write legislation look upon their task. How do they perceive the things they are dealing with--the conditions which are affected by policy in the current system and in the future, and how they read the experiences of the past?

The third effort is in connection with a study of consumer and homemaking education. It is an attempt to understand where there may be changes in information and knowledge in the next ten to fifteen years to which young people presently in school should be exposed.

These specific efforts are a relatively minor part of the total study. Measured in dollar terms, there are two major contracts. One is with the University of California at Berkeley to examine the distribution of federal, state, and local funds for vocational education. The second is with Abt Associates and deals with state and local compliance and evaluation practices. There are also four other contracts for extramural research and several intramural studies. All of these are described in detail in "The NIE Vocational Education Study--A Progress Report" which in included as Appendix C.

The National Institute for Education will transmit to Congress and to the President an interim report in September 1980 and the final report in September 1981.

Michael O'Keefe

Dr. O'Keefe structured his remarks around the the macro issues which he thinks should be of concern to the federal government when considering vocational education reauthorization. He described what he sees as the three principal federal interests in vocational education. The first is the impact and the contribution of vocational education to the economy. The second federal interest is in equity. There are two sides of the equity equation. One is the financing side: Who pays? Who bears the burden of supporting equity efforts? The other side is: Who benefits? The third federal interest is in quality of vocational education.

After listing these three broad interests, O'Keefe elaborated more on equity. O'Keefe thinks one federal role is to produce a more equitable distribution of both the costs and benefits of vocational education. There are some "traditional senses" at the federal level of who benefits and who does not. One example is that inner city youth do not participate in vocational education to the same extent as youngsters from more middle class families in suburban areas. There is also a concern that females participate at lower rates and therefore benefit less. A broader equity issue, not limited to vocational education, is the extent of federal investment in young people who continue their education after high school and those who do not. On the average, the federal government invests five to six times as much in young people who continue their education. Why or how can this discrepancy be justified?

Once the federal issues are identified, O'Keefe believes it is necessary to ask how each of these issues is defined, how it relates to the state and local interest in the areas, and to try to understand what is going on with regard to each issue at present. Vocational education focuses on a whole series of intersecting

activities in our society and analysts need to be aware of these interactions. The role of military training and the extent and costs of private business training are examples of such interactions.

O'Keefe thinks the "Washington policy making community needs an understanding of what vocational education is, of what is actually going on out there under this term 'vocational education'." In describing what is going on, it is important to make distinctions as to the institutional sector in which the activity takes place, the participating student group, the intensity of the activity, and the relatedness of the activity to further career and job mobility. O'Keefe has found that Congressmen respond very positively to very concrete information. They want to know what is going on in classrooms as a result of the dollars they appropriate.

The fundamental question, in O'Keefe's view, is what is good education? And this relates directly to the Congressional question on what is going on out there. Education is about "What goes on between a student and a teacher, a student and that student's peers, a student and the rest of that student's environment." When it is possible to define the characteristics of good education, it is possible to ask questions about the nature of programs and their requirements and incentives which either assist sound education in the classroom or get in the way.

O'Keefe then described some characteristics of good education which were identified from an examination of compensatory education programs as part of the reauthorization for the Elementary and Secondary Education Act:

1. Good education is sensitive to individual needs.

2. Good education occurs in schools where there is leadership by the principal.

3. Good education occurs in schools where the teachers and principal work together as a team with complimentary professional skills.

4. Good education involves attention to the individual student in terms of diagnosis, prescription, and evaluation of progress.

A similar analysis would have value for vocational education. In this case, the focus would be on the proper role of the school for the youngster who is headed into the job place. How should the school be linked to the employment sector? A related question concerns the youngsters who drop out. What are the best methods

for serving them? Presently CETA programs are focusing on these young people and there is limited involvement of the traditional education system. Should there be federal programs to try to stimulate more linkage of CETA and the school system, and if there should be, how can it be done?

Finally, O'Keefe raised the question of the whole federal mechanism--how all the different federal education programs interact and the incentives they produce at the local level. Presently many of the separate programs are contradictory to one another and to good educational practice. Although O'Keefe does not think it can be addressed in the 1981 reauthorization, he would like to examine how all the different federal programs articulate at the local level. He thinks it should be possible both to achieve the federal government's objectives and to lead to better educational practices at the local level.

O'Keefe's presentation stimulated an extended discussion of the meaning of equity. Dr. David made the point that equity is not a unitary concept. Most of the measures that are taken in educational legislation are designed to reduce inequities that are perpetuated by the working of the system. Sometimes these measures address the removal of irrelevant barriers, such as denial of access to an institution because of color. Other times they involve attempts to compensate for a set of characteristics deemed to be due to historical familial conditions, i.e., the disadvantaged. Still other measures relate to the distribution of resources and the purposes for which these resources are to be used. Neither the federal government nor the education community has come to grips with what equity and equality actually involve. If there had been such a debate, the nation might be so divided on meanings that what progress has been achieved might not have been possible.

Robert Glover, who directed a national study of opinion leaders, noted that his respondents were inconsistent in their attitudes towards achieving equality. Equality of opportunity was highly valued but affirmative action was rejected by a large majority of the panel. Dr. Glover noted that one of the problems in policy analysis is its addiction to historical data. This causes analysts to ignore the basic value questions and to focus on the facts. In reality, actions are based not on the facts but on perceptions, beliefs, and values. If these are not examined, the wrong questions may be asked simply because data are available to answer them.

A question was raised on how the federal government gets involved in the various aspects of educational problems. Dr. O'Keefe described it as a three stage process. The first is that a few states provide leadership. The second is the federal

government picks up the leadership role. The third is that states in larger and larger numbers pick up the role and recognize their responsibility with regard to the particular problem. Extending this process into vocational education, one of the solid trajectories at the federal level appears to be a concern for special populations.

Dean Griffin

Mr. Griffin reported on the legislative study in which the American Vocational Association (AVA) has been engaged. This study has been working to identify the major issues related to reauthorization of the Vocational Education Act and to develop recommendations relevant to these issues. One step in this process was the preparation of the preliminary lists of issues and recommendations reproduced as Appendix D. These were presented to members of the AVA who attended the annual convention in December 1979.

From the work of the task forces that prepared these lists and from other sources, Mr. Griffin has identified six overriding issues which he presented to the conference:

1. The evaluative criteria that can be applied to secondary vocational education. This issue involves the purposes of secondary and post-secondary vocational education, and how the effectiveness of these two programs is to be measured.

2. Improving the quality of existing programs. This issue will revolve aroung the definition of maintenance of programs and the relationship between maintenance and program quality. This involves personnel development, utilization and purchase of equipment, curriculum development, planning, and the advice seeking process. All of these involve improving the quality of existing programs.

3. The structure for vocational education at the state level. At present, most decisions regarding vocational education are made by state boards. As the list of those who want to be involved in vocational education grows, so do the demands for some say in these decisions. Some will advocate passing funds through to the local level, and others will argue that the state board should represent all those interested in vocational education. A related set of issues concerns the services that the

state office for vocational education will provide as the kinds of institutions with a responsibility for vocational education increases.

4. The flexibility of federal statutes regarding state and local administration. The present rules, regulations, and paper work are generating much frustration and "anti-big government" sentiment.

5. Categorical funding for programs and functions versus basic state grant. This relates to what is the role of the federal government and can that role be served better through the basic state grant or through a series of categorically funded titles? Some people are claiming that specific purpose titles would provide a sharper focus for the federal governments role, would provide more incentive, and perhaps would accomplish more.

6. Vocational education as an economic stimulus at the local and state level. This involves the linkages between vocational education and the demand side of the labor market, and how this can be made part of the process of economic development.

Mr. Griffin stressed that these six issues in no way indicate the positions that he sees the AVA supporting. The association is not ready to take any such position at the present time. These are the issues Griffin sees surfacing and likely to be the focus for discussion in the coming months.

Mr. Griffin's presentation led mainly to the discussion of two topics: the balance between categorical support versus block grants, and the degree of program improvement caused by federal legislation.

Dr. O'Keefe said that he sees the edge of federal policy in the next five to ten years on preserving the balance between block grants and targeted money. On the one hand there are those whose memories "go back to when the money was sent out with a great deal of faith and used with a great deal of hope that no one would come by and ask how it was used." The thrust will be to streamline programs, to consolidate them and try to make them simpler, but at the same time to pursue the objectives of the federal government.

Dr. David noted that the vocational education legislation is less permissive than it was, but it is still highly permissive. He attributes at least part of the present confusion on the distribution of funds to the inconsistency inherent in the legislation.

Dr. Taylor, Executive Director of the National Center, suggested that at least one way to avoid overly restrictive federal regulation would be to strengthen state leadership. The state could then carry out its compliance responsibilities, but in a positive way rather than always, after the fact, telling the local district it was wrong.

The degree to which vocational education can be characterized as emphasizing improvement in program quality was debated. In Dr. David's judgment, there is not a pervasive assumption throughout the field that most systems are susceptible to improvement. He perceives, instead, a largely ritualistic set of statements about program improvement. Dr. Taylor, in contrast, thinks there has been considerable progress. He thinks it is possible to document many efforts which have led to improved programs. Both agreed that with the present federal investment it is very difficult to bring about significant changes in program performance.

Delphi Study

Following the policy panel there was a discussion of the Delphi study being conducted by the National Center. At the time of the conference only round one of the study had been completed. The presentation concentrated on the methodology and methods for presenting the data. Several suggestions were received for analyses and presentation. Some of these are reflected in Chapter 3 and others will be incorporated in further analyses to be conducted in the second year of the project.

Workshop on Alternative Futures

On the second day of the conference the participants were divided into three workshop groups and asked to consider alternative futures for vocational education. Each of the three groups was asked to assume a different frame of reference in its discussions: optimistic, pessimistic, and realistic (most likely). Summaries of the discussions in the three groups follows.

Optimistic Workshop

There were three themes that were reflected in most of the discussion in the optimistic workshop. One of these was continued

support and funding for vocational education regardless of the condition of the economy. The second was that many of the problems and conditions that will influence society and the labor force will have particular importance for vocational education. The third was that vocational education will become an increasingly varied enterprise with regard to the characteristics of students served, settings in which conducted, and its coordination with other trainers, employers, unions, and the military.

Having been instructed to take an optimistic outlook, this group assumed that support for vocational education would be independent of economic conditions. They reasoned that if the economy were healthy there would be a strong demand for skilled workers, especially in the high technology areas that are likely in the 1980s. Conversely if the economy were depressed, vocational education would be a means used to stimulate economic recovery.

Carrying its optimistic framework further, this group concluded that most of the main problems and changes in society in the 1980s will have implications for vocational education. One of the major problems, for example, will be energy. Whichever route is taken--hard, high technology or soft, renewable resources--there will be a need for training and retraining of workers to build, operate, and maintain these new energy sources. Similarly, dealing with an aging population should produce a demand for new kinds of skills and occupations for meeting the needs of the elderly.

The third optimistic theme was that vocational education will be more flexible and varied in the 1980s. Instruction will be individualized, it will be easier to enter and leave programs, and there will be greater cooperation with other organizations that produce and employ trained workers. If a military draft or some type of universal youth service is established, close coordination with the armed services is especially likely.

Pessimistic Workshop

As probably would be expected of a group asked to think in pessimistic terms, a severe economic downturn was the event considered most likely to have a negative influence on vocational education. Such a downturn was thought to lead to mass unemployment and a return to the 1930s type of migration of workers crossing the country seeking employment. Similar, but more limited, events seen as likely to influence vocational education were sudden and widespread changes which would affect customary practices in given industries or sectors of the economy.

Other events more specific to vocational education were changes in the federal role or in the manner in which vocational education is funded. The federal role could change in two different ways either toward far greater federal control or toward the elimination of a specific federal role. Either of these extremes was thought to be detrimental to vocational education. The funding change, which the group agreed was most likely to lead to harmful consequences, was the elimination of institutional support and the adoption of some form of voucher or entitlement system.

If the federal role were to move toward greater control of vocational education this could be achieved in a number of ways. One would be through the mandating of national curriculum or competency standards. Another would be through writing and enforcing stricter rules and regulations to assure that national priorities are emphasized. A third would be through targeting federal support only for specific purposes such as serving special needs groups or overcoming sex stereotyping.

Most in the group agreed that any of these changes would harm vocational education. A national curriculum would make vocational education less responsive to state and local needs and to regional variation in occupational performance. Stricter rules and regulations would add to what many vocational educators currently perceive as an overwhelming amount of paperwork and compliance responsibility. Targeting vocational education to specific groups or goals was seen as likely to stigmatize all vocational education as for the "special" student and not for the average student without unusual problems. On the other hand, if the federal role were eliminated, there is the possibility of excessive state control which emphasizes efficiency and largely ignores broader social goals such as increasing equity.

If the federal role were not eliminated but instead shifted from institutional support to individual support, other detrimental consequences were foreseen. The form this would take would probably be some type of voucher system that the individual could use with any supplier of training services, public or private. Such a policy was considered likely to lead to a proliferation of trainers and excessive competition for students. Inevitably, it was thought, many of these trainers would provide poor training and their students would be at a competitive disadvantage in the labor market and subject to employer exploitation.

The general theme that seemed to be reflected in most of these pessimistic projections was that vocational education in its traditional form would cease to exist. The traditional form implied in these projections is public, institutionally based,

receiving some of its funds from the federal government, and serving a broad cross-section of the population. Changes which moved vocational education away from this condition were generally considered pessimistic.

There were, of course, contrary positions on virtually every possible change. One, for example, on overcoming sex stereotyping was that the worse possible future would be a continuation of the status quo. The individual who advanced this argument contended that enough has been done to quiet the most outspoken advocates, but there have been no real structural changes toward greater equity. If things continue as they are at present, little substantive change will be accomplished, but enough activity will be present to prevent the political pressure to build sufficiently to accomplish real change.

Realistic Workshop

The realistic workshop foresaw a future for vocational education that will be essentially a continuation of the present but with a modest decline in funds and a greater emphasis on special needs populations. The group basically accepted most of the projections made in the Institute for the Future's report with regard to demography, economic conditions, labor force composition, societal expectations, and quality of education. Other potential influences which they stressed were international policy, domestic policy, and technology. They also anticipate that vocational education will continue to be seen as for "someone else's child." Single issue politics are expected to dominate national debate. In other words, candidates and policies will be evaluated by each pressure group in terms of its own priorities.

Little major change was seen in the role of the federal government in vocational education. The three major components of this role will be to improve system capability, to facilitate equity, and to improve quality. Similarly, little change is expected in state and local roles. There may be a fuller development of state policy for vocational education, but this should not change the basic responsibilities of the separate levels.

One area where modest change is anticipated is in the relationship of vocational education with other training organizations. There will be more coordination at the local level and a higher level of cooperation at the federal level. Business and industry are likely to play a more active role.

Wrapup Session

After the workshops, there was a wrapup session during which the major conclusions reached by the three groups were discussed. The main theme underlying this session was how much change could really be anticipated. Those who thought the 1980s would be essentially like the 1970s, argued that institutions do not change unless subjected to major, dramatic influences. Unless such influences are expected in the 1980s, vocational education will probably continue to be much the same as it is at present. Those who expected more fundamental shifts cited the decreased number of secondary students, reduced funding in real dollars, and greater involvement with other trainers and sectors of the economy. Whichever projections prove to be most accurate, the conference served to identify many of the major issues, events, and trends which may influence vocational education in the 1980s.

As the final bit of data collection at the conference, each participant was asked to list the policy issues and research and development questions which they thought would be of most concern to vocational education in the 1980s. These comments are summarized in Tables 4.2 and 4.3.

TABLE 4.2

POLICY ISSUES SUBMITTED BY
FUTURES CONFERENCE PARTICIPANTS

Data Needs/Evaluation

- Achieve consensus on dimensions of quality for assessing long-range and immediate outcomes of vocational education for alternative providers.
- Insure that computer assisted career information systems provide relevant, valid and reliable information to guide career decisions towards realistic and informed choice (the need for linkage between client characteristics, aspirations and career choices, enrollment, nonenrollment, program success or failure, job placement, income, client job satisfaction, employer satisfaction, education needs).
- Comprehensive vocational education data base, proper analyses, and dissemination.
- Costs--Vocational education is expensive: are there new teaching methods or devices to cut per pupil cost? Can this be done by better targeting of groups or better coordination among suppliers or better links with employers?
- Policies that cause an accurate and useable data definition of vocational education; an accurate description of the total range of services and who is being served and how well.
- Establishment of a common data base at national level--to include needs, employment/labor needs, etc.
- Monitoring "accountability" to federals versus local control.
- How can the quality of vocational education be determined?
- The effectiveness of vocational education in both an absolute and comparison sense.
- Should vocational education research and development be given a mandate or high priority to develop a more complete knowledge base on the requirements for high quality programs in terms of relative cost, teacher preparation and qualifications, curricula, support services, facilities and equipment, and other variables?

TABLE 4.2, POLICY ISSUES, continued

Meeting Federal Priorities/Federal Role

- Should the stated purpose of the 1963-1976 vocational education legislation, i.e., to assist the states to provide all persons with vocational education in all communities (who need it and can benefit from it), continue to be an overriding concern of the federal government?
- Should an increased share of federal support for vocational education be used to build state and local capacity for program improvements?
- The extent to which federal expenditures for vocational education will be directed toward improvement and change versus maintenance and/or expansion.
- The level of federal expenditure deemed sufficient to drive federal priorities (change/improvement).
- Governance: what is the federal role in vocational education?
- The extent of control deemed necessary to assure compliance, responsiveness to federal priorities.
- Federal legislation should address the issue of definition of vocational education--what is a model program, and how do you measure success? It seems especially important that vocational education not be equated with "schooling"--we need a definition that includes all levels of education (perhaps?) and certainly the measure of success must entend beyond job placement.
- How can the federal, state, and local relationship be delineated and improved?
- Should the federal government play an increasing role in the support of categorical funding for vocational education in the 1980s? Should the preparation of the labor force become more of a state or local responsibility?
- Federal government should be less prescriptive in their dictates thus permitting state to follow the needs and dictates of their society.
- Should Congress continue to emphasize state planning requirements without direct involvement of local planning?

TABLE 4.2, POLICY ISSUES, continued

- The interaction of vocational education policy at the federal level with other federal policies in the fields of education, employment, training, civil rights, and social welfare.

- The requirements (structural and substantive) for federal policy for human resources development.

- Should vocational education continue as a mainstream system for the preparation of the total labor force; or should vocational education and CETA resources and authorization be combined? What are alternative organizational patterns and delivery systems?

- The extent to which the federal government will continue to look to vocational education as a mechanism for social change as well as a mechanism for manpower training.

- Technological change, shifts in labor force, energy costs (transportation), demographics, all argue for flexibility and the capability for responding to change. How can federal legislation assure and enhance this process in delivery of vocational education?

- What should be the role of vocational education in the national economy?

- Inattention to philosophical question of "who pays and who benefits."

- Public Education--Federal dollars allocated toward public awareness campaign (a'la health issues) directed toward breaking down sex stereotyping (nontraditional job choices).

- Lifelong learning legislation.

- Will return to draft be "universal", i.e., men and women?

Coordination/Cooperation With Other Vocational Education Deliverers

- Cooperation with other agencies/institutions for the on-the-job training as opposed to traditional vocational education classroom.

- If vocational education is to continue to serve the country, it must respond to the shrinking traditional student/client group--the proposal should be to increase the number and

TABLE 4.2, POLICY ISSUES, continued

intensity of linkages with other agencies/programs. Number: Linkages must be developed with OIC, SER, and other CBO's, in addition to those established with CETA today. Intensity: Experience has shown that numbers of contacts can serve to knock down attitudinal barriers and communication barriers; links with other groups should be routine.

- Cooperation versus competition among involved agents and agencies--the hue and cry is for articulation, cooperation, and consideration. Yet little exists that is not forced. How much can vocational education reasonably expect, and can competition be used to facilitate the strengthening of the participants.

- The balance of public versus private delivery of vocational education.

- The mainstream, inschool system versus the supplemental, external system for occupational preparation (vocational education versus CETA, for example).

- Better coordination of resources and services for all sectors of society--the total of which would still fall short of the mark (i.e., minimized competition for funds and increased efficiency and targeting of services).

- Better knowledge as to how to guide the educational process in nontraditional, educational setting, viz, work-places.

- Integration of various legislative intent--even if catagorized aspects remain--Education Agency Department, etc...must develop guidelines which tend to develop cooperative effort.

- Policies that facilitate, rather than impede, cooperation among types of schools, between education, business, labor, armed forces, and other agencies.

- Incentives need to be developed that will more clearly tie vocational education in with business, industry, and labor.

- Alternative delivery systems for vocational education.

- Policies that allow for mechanisms for the aggregation of resources from federal, state, and local levels, plus private industry, unions, armed forces, etc. to be brought to bear on vocational education needs.

TABLE 4.2 , POLICY ISSUES, continued

- Policies that are up-to-date on the nature of the institutions providing the services, the services being provided, and the persons being served.

Articulation (Coordination)

- Policies that encourage coherence in the total vocational education system--secondary school to community college to university, plus cooperation with other agencies and organizations involved.
- Articulation of total system for program improvement.
- Better articulation with all participants in the vocational education scene.
- Articulation among secondary, postsecondary, and adult programs.
- What should be the role of vocational education at the various levels (e.g., secondary, postsecondary, and adult)?

Special Needs Groups

- Integration versus segregation: new student populations--how can vocational education deal with new student populations which are disadvantaged, handicapped, or in other ways "special" without creating a new educational segregation which extends into later life.
- Responsiveness to the specialized career needs of the increased numbers of women entering the labor force.
- Increased participation of minority populations in vocational education with special emphasis on tailoring programs to those needs.
- More adequately servicing the handicapped.
- Vocational education servicing undocumented workers, etc.
- Incorporation of more flexibility in the implementation that states meet the vocational needs of the special needs population.

TABLE 4.2, POLICY ISSUES, continued

- Assessment of the vocational training needs of relatively recent and emerging client populations:

  1. Adults
  2. Handicapped
  3. Disadvantaged
  4. Minorities

- Displaced Homemaker--(older women cohort) Continued public support of retraining and education opportunities plus consideration of "Veterans Preference" type compensation.

- Technology--Issues affecting especially female intensive occupations which must be concerned with job displacement, retraining.

Availability Of/Access To Vocational Training

- Education and training--Policy must be initiated to support the access of working class women, who suffer from lack of time, money, child care, counseling benefits, on-the-job training, outright discrimination, and negative attitudes both societal and personal (family or employer). (See report of National Advisory Council on Women's Educational Programs Working Women Speak: Education, Training Counseling Needs.)

- Should national priorities of equal access and equal opportunity to benefit from vocational education be supported entirely or in major part by the national government in order to more effectively achieve these goals?

- Should the primary federal role in vocational education be to provide compensatory programs and services to those who have been unfairly denied education and work opportunities.

- Continue work on opening doors to minorities, etc.

- Role of vocational education for serving older Americans.

- Equal opportunity.

- Affirmative action.

- Expanding the concept of vocational education to include adults as a principal target population.

TABLE 4.2, POLICY ISSUES, continued

- What are the unique organizational, administrative, and final adjustments that should be made to accommodate a significant increase in adult populations (especially women) who need training and re-training for the labor force.

- Relationship between quality (efficiency perhaps) and equity in vocational education.

Funding

- Definitions--not only is vocational education experiencing an influx of new student groups, but an influx of new organizational structures. How should federal, state, and local tax dollars relate to private sector vocational education, post-secondary vocational education, etc.?

- Funding--Who will be supplying funds? What constraints will be put on the use of funds?

- Practical legislative effort to achieve "recurrent education" capability--unemployment funds--welfare funds--and other special purpose funds and their relationship to vocational education.

- Categorical funding versus consolidation (federal funding).

Special Roles/Relationships Of Vocational Education

- Relationship with rest of education establishment--I think that sooner or later vocational education will need to declare or define its identity with education. That might be one strong way to repair vocational education's image as for "somebody else's child."

- Life-long learning (related to demographic changes).

- Energy crunch concerns.

- The role of vocational education in basic skills development.

- Reform of vocationally-related educational services to meet the more generalized career needs of the American worker.

- Family support systems--child care must become a viable policy issue in the immediate future if we are to reaffirm support for traditional family based value system. (This issue must not be ghettoized as a "women's issue.")

TABLE 4.2, POLICY ISSUES, continued

- Conflict resolution regarding expectations of differing societal factors.
- Maintenance of existing vocational programs.
- Achieve consensus of generic skills which offer the learner mobility across occupational clusters and across steps in the career ladder.

Education And Work

- Establishing parity among education and work institutions.
- Integration of education and work to reduce barriers to free choice and create more order and continuity in the education and job market.

Equity

- Equity and compliance--Policy is threatened here by lack of concern for compliance. The "equity as a luxury" issue cannot be allowed to encroach on the value, e.g., is a sex/race biased curriculum efficiently delivered really progress?
- Pay Equity--Working Women Speak has a study of job evaluation systems. More emphasis and coordination must be applied to the Equal Pay Act, dysfunctional in case of women. Occupational segregation based on traditional pay inequities must be challenged.

Planning

- Environmental change--Is it worth identifying key external factors for change and setting up an ongoing inventory system that would give early warning signals. Can a number of alternative scenarios be tied to a model of vocational education delivery systems so that the consequences of alternate policy choices can be examined?
- Field testing of a long-range planning process for vocational education which continuously updates mission, assumptions, goal priorities, strategies, role definition, needs and effectiveness with interagency exchange at federal, state, and local levels, i.e., planning as continuous dynamic process.

TABLE 4.2, POLICY ISSUES, continued

- Long term planning funds.
- Needs assessment--Can a clear identification be made of target groups with specific needs? Can vocational education's role be coordinated with other potential suppliers of services to these groups?
- Develop model for establishing priorities for institutions in a time of economic retrenchment.
- Consideration must be given to the socio-economic system in order to make vocational education more responsive by: changing structure of vocational education system; relook at funding; developing system of incentives to encourage disadvantaged to participate in program.

Willingness/Readiness To Change

- Vocational education cannot sit by idly as they did from 1863-1963 and wait. They must be alert to changes and vibrations, when sharp enough to respond without rocking the boat, but helping to stabilize the employment needs.
- The capability and willingness to make changes in vocational education programs in face of evidence and products available.
- Policies that encourage "horizon" planning and the necessary flexibility and responsiveness to adapt the vocational education system to changing social and individual needs.
- Speed up the process of delivering services--e.g., decrease, as much as possible, the time it takes to set up a new vocational education program and have skilled graduates ready for the job.

State Role/Governance

- In looking at vocational education--generically--if it does occur at many levels and in many places/agencies/organizations--how realistic is a "single state agency" to administer funds--and provide "leadership."
- Should federal and/or state funds for vocational education flow through directly to LEA's?

TABLE 4.2, POLICY ISSUES, continued

- The extent to which governments will institute policies for the growth of vocational education.
- Politics of vocational education--Where does politicing stop and education return? How much is required for educational system maintenance and how much is required for superstructure or bureaucratic maintenance?
- The leadership of vocational education at entry level (structure and personnel).

Table 4.3

RESEARCH AND DEVELOPMENT ISSUES SUBMITTED BY FUTURES CONFERENCE PARTICIPANTS

Equity/Access

- How can vocational education be made available to all Americans?
- Problems related to increasing the accessibility of vocational education.
- Economic and societal consequences of inequity.
- How to evaluate "success" of vocational education programs regarding equity concerns.

Coordination/Articulation

- Determine which services are best and reasonable to be provided by which agencies.
- Research data on in-plant vocational training conducted unilaterally by employers.
- How much training and education in industry is now articulated with vocational education?
- How much training is conducted in cooperation with unions? Apprenticeship, upgrading, job specific (even exam specific in civil service for instance).
- Problems related to increasing the cooperation among agencies and organizations concerned with vocational education.
- What are the special needs (requirements) of the different agencies charged with delivering vocational education in different environments (inner-city, rural, urban, etc.)?
- What are the barriers to cooperation between various agencies delivering vocational education?
- Involved comparative studies--what are the relationships among these agencies providing vocational education?

Table 4.3, Research and Development Issues, continued

Special Needs Groups, continued

- Vocational education assessment of status of women.
- Efforts in assisting Indian populations in obtaining or establishing vocational programs.

Curriculum Content and Improvement

- Identifying competencies for "employability" as well as skills training.
- Identifying competencies for consumers.
- Energy modules for vocational education programs.
- Energy curriculum development.
- Curriculum bias issues.

Personnel/Professional Development

- Vocational education professional development revitalization--especially university graduate programs.
- Improvement of quality of the IHE (sic) personnel development programs.
- Equity and access for professionals in vocational education as well as students.
- Training packages for overcoming stereotyping.
- Training packages for overcoming "we've always done it that way."
- What approaches will be most effective in preparing large numbers of vocational professionals to serve the diverse needs of an ever-expanding clientel--adults, disadvantaged, immigrants, etc.?
- Understanding "value-added" perspective toward vocational education.

Table 4.3, Research and Development Issues, continued

Coordination/Articulation, continued

- Improvement of articulation between high school, post-high school, 2-year institutions, institutions of higher education, business, and federal vocational training agencies in terms of cooperative efforts, transfer and recognition of previous vocational training, and the establishment of the opportunity of their clients to advance in their career choices.
- How can vocational education (or preparation for employment) become more of an integral part of the total educational system?
- What type linkages should be formed between vocational education, CETA, and youth programs to make the greatest impact upon preparation of individuals for employment?
- What mechanisms can be developed, or processes initiated to increase collaboration between public education and business, industry and labor?
- How can furtner articulation be achieved among organizations engaged in preparation of individuals for work--secondary schools, postsecondary, four-year institutions?
- Research federal intervention alternatives--if the federal government provides administrative and development funds, will that enhance availability, participation rates, outcomes?

Special Needs Groups

- What approaches to delivering vocational education work best with which groups of persons?
- Structural barriers to women's vocational education.
- Psychological barriers to women.
- Determine discrepancies between abilities of special populations and factors in employability.
- Relationship between the norms/expectations of key actors in the workplace and those of disadvantaged youth and adults regarding work; identification and explanation of discrepancies in the norms of disadvantaged learners, learning facilitators and employers.

Table 4.3, Research and Development Issues, continued

Data Collection and Evaluation

- Teaching and learning studies--what works best and for whom?
- Determine factors of employability.
- Criteria of vocational education effectiveness.
- Information on vocational education impact for oversight hearings.
- The measurement of the effectiveness of vocational education.
- The efficacy and relevance of R&D based solutions.
- Information systems.
- What incentives can federal government provide that will improve the delivery of quality vocational education?
- What outcomes can vocational education reasonable expect to provide?
- Intervention study, i.e., most appropriate, vs. most efficient. Counseling and guidance attitudes and behaviors, etc.
- Job (employee) satisfaction and employer satisfaction.
- What is happening in states with respect to legislation for vocational education? - i.e., basic laws to establish and fund education/work programs. Is there an inventory of such statutes? This data could help in re-defining the federal role in vocational education.
- Problems related to improving the capability for promoting a more positive image for vocational education.
- Examination of the underlying (both stated and hidden) assumptions of vocational education legislation since 1963 and the empirical and historical basis for their continued use, or modification or abandonment.
- Analyses of the body of literature on the "futures" of vocational education published since 1906 and assessments from strengths and weaknesses of their forecasting or predictive dimensions.

Table 4.3, Research and Development Issues, continued

Data Collection and Evaluation, continued

- Whys and hows of transferrable skills.
- At what intervention points can federal funds make the greatest impact in improving vocational education?
- Descriptive studies in the following matrix:

Organization	Students	Teacher	Curricula	Resources	Struc.	Plcmt.
Pub. Sec. Schools						
Private Sec. Schls.						
Propriatory Voc. Schools						
On-Job Training						
Business, Ind. & Labor						
CETA						
Military						
Postsecondary						
College, Univ.						
Etc.						

- Family issues vis a vis changing roles.
- Voucher scenarios.

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APPENDIX A

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APPENDIX B

Policy Choices for Vocational Education

POLICY CHOICES IN VOCATIONAL EDUCATION

by

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Report R-48A

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INTRODUCTION

This report examines the impact of changes in the vocational education environment that are likely to be important to policymakers over the next 15 years. It contains forecasts of a number of trends that will be of significance to vocational educators, an analysis of the policy implications of those trends in the education environments, and an assessment of how vulnerable policy decisions might be to further changes.

The report is divided into three parts. Part I describes in some detail likely changes in the external environment that will be important influences on vocational education. Part II focuses on the implications of these environmental changes on vocational education and on the policy changes planners in vocational education will face. Part III analyzes the likely impact on planning of alternate environmental outcomes. A separate technical appendix contains actual trend forecasts and a detailed listing of assumptions.

PART I

THE VOCATIONAL EDUCATION ENVIRONMENT, 1970-1995

This part describes a consistent set of most likely forecasts for key external environmental variables. While they cannot be exact predictions of what actually will be, these forecasts do represent a set of outcomes that have a relatively high degree of likelihood. From this perspective, they are meant to provide an aid to planners who are thinking through the likely impact of changes in external factors on vocational education. The variables described were selected as being the most important in influencing the course of vocational education over the period to 1995. There are five separate sections: demography, the labor force, the economy, societal expectations, and education.

DEMOGRAPHY

The dominant characteristic of demographic change in the United States continues to be the maturing of the abnormally large population cohort born between the years 1945 and 1963. As the members of this group reach working age during the 1980s, they will have a major impact on the workplace and the composition of households. At the same time, the school system that expanded to accommodate them will be receiving an absolutely smaller cohort.

POPULATION

Birth rates were dramatically high from 1945 through 1963. The fertility rate, which had been declining slowly for a century, had reached an historical low during the years of the Great Depression. From 1930 through 1940, total fertility rates (annual births expressed in terms of the implied completed fertility of 1,000 women) averaged 2.3.* During the five years of war that followed, fertility rates rose slowly to 2.5. In the immediate postwar years, the rate rose rapidly--going from 2.5 in 1945 to a peak of 3.7 in 1957. It then leveled off until the early-1960s, when the rate began a sharp decline from 3.4 in 1963 to a low of 1.8 in 1975. The result was the creation of a large population bulge that will remain a dominant force in American life as it matures (Figure 1).

Between 1945 and 1970, the U.S. population grew at an annual rate of 1.52 percent. In contrast, the annual rate of population growth from 1970 through 1977 was 0.82 percent. The rate of increase between 1977 and 1995 should be of the same order, averaging just over 0.8 percent a year.** This projection assumes that future fertility rates vary between 1.8 and 2.0 between 1980 and 1995 (remaining below the long-term replacement rate of 2.1 throughout the period).

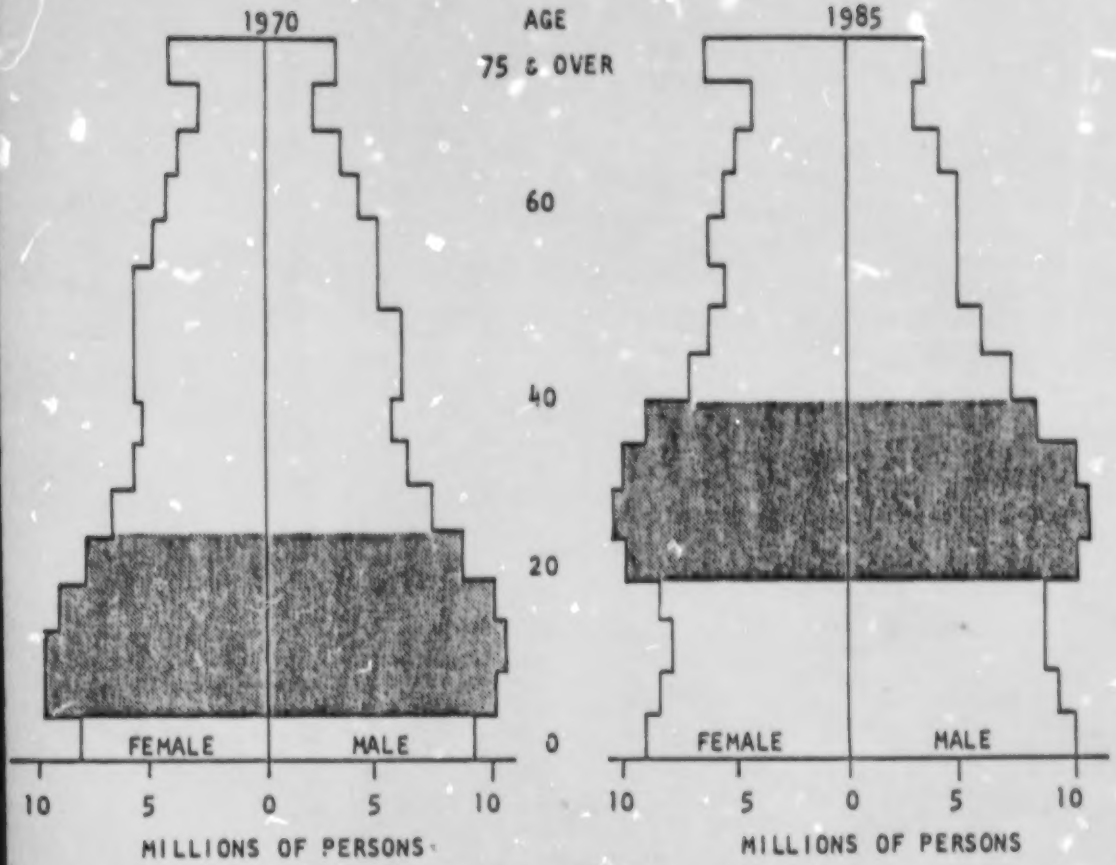
---

*Bureau of the Census *Current Population Reports* (hereafter CPR), P-25, #802.

**For a description of sources and methods used in calculating population figures, detailed historical series, and projections, see Appendix A. Where no footnote is appended to a table in the text, the numbers are directly derived from the tables in the Appendexes. A footnote appended to a table refers to the source of historical data. Throughout this report, trends are all based on Institute projections.

FIGURE 1

THE CHANGING U.S. AGE DISTRIBUTION



Indicates the baby-boom group.

TABLE 1

U.S. POPULATION, 1970-1995

	Millions	Annual Percent Change Over Period
1970	210.2	1.08
1975	219.2	0.84
1977	222.6	0.77
1980	229.1	0.96
1985	240.5	0.98
1990	252.2	0.95
1995	260.2	0.63

Within the overall growth rate of 0.8 percent, though, there will be some variations. The rate of increase will go from 0.77 percent in the mid-1970s to almost 1 percent in the mid-1980s, as the number of women of childbearing age increases. Then the rate will gradually fall to about 0.6 percent in the early 1990s in response to the declining number of women entering childbearing age.

AGE DISTRIBUTION

The aging of the baby-boom group will have a large impact on the relative size of future population age groups. Table 2 shows that under the population growth rate observed, there already has been a fall in the relative size of the young school age cohort (ages 15 and under); that

TABLE 2

AGE DISTRIBUTION OF POPULATION, 1970-1995

(Percent in Each Age Group)

Age	1970	1977	1985	1995
15 and under	30.2	25.7	23.9	24.0
16-24	15.7	16.9	14.8	12.1
25-34	12.6	15.6	17.3	15.4
35-44	11.4	10.9	13.5	16.0
45-64	20.4	20.1	18.9	20.2
65 and over	9.7	10.8	11.6	12.3

there will be a large fall in the relative size of the labor force entry cohort (ages 16-24) between 1977 and 1995; and that there will be some rise in the relative size of the young adult cohort (ages 25-44) and of those 65 and over. The most critical change will probably be that of the fall in the relative size of the 16- to 24-year-old age group, which accounts for a good portion of college students, armed forces volunteers, entry-level workers, and persons forming new households.

Table 3 shows in more detail the change in age distribution of the younger age groups. The rapid decline in birth rates during the 1960s and early 1970s clearly affects each successive age group over time: children 13 and younger in the late 1970s, the teenage groups in the mid-1980s, and young adults in the late 1980s and early 1990s. It is important to note, though, that the increase in the proportion of very young children in the mid-1980s will begin to affect the teenage population in the 1990s. This is the impact of the "echo" boom. The large number of females born during the 1950s will be reaching prime childbearing age during the mid- and late 1980s. Even with fertility rates averaging well below long-term replacement rates, the number of children born will be relatively high.

TABLE 3

AGE DISTRIBUTION OF YOUTH POPULATION, 1970-1995

(Percent in Each Age Group of Total Population)

Age	1970	1977	1985	1990	1995
0-5	10.3	8.6	9.6	9.6	8.6
6-13	16.0	13.3	11.2	12.0	12.4
14-15	3.9	3.8	3.1	2.6	2.9
16-17	3.8	3.9	3.0	2.6	2.8
18-19	3.6	3.9	3.1	2.9	2.6
20-21	3.4	3.8	3.4	2.9	2.5
22-24	4.9	5.4	5.4	4.4	4.1
25-29	6.8	8.4	9.0	8.4	7.2

Indicates a fall of 0.4 percentage points or more from previous periods.

MINORITY POPULATION

The percentage of population that is defined as minority (black and other races--mostly Asian) will increase from 12.9 percent of the total population in 1970 to 16.5 percent in 1995 (Table 4).

TABLE 4

MINORITY POPULATION, 1970-1995

(Percent Distribution by Year)

	White	Black	Other
1970	87.1	11.7	1.2
1977	86.0	12.3	1.7
1995	83.5	13.6	2.9

Since the minority populations tend to be younger on average and to have higher fertility rates, the minority share is even higher among the younger age cohorts. For example, Table 5 focuses on the population cohort aged 16 to 24. The minority share of this cohort will rise from 13.5 percent in 1970 to 20.1 percent in 1995.

TABLE 5

MINORITY POPULATION AGED 16-24, 1970-1995

(Percent Distribution by Year)

	White	Black	Other
1970	86.5	12.3	1.2
1977	84.7	13.6	1.7
1995	79.9	16.2	3.9

These estimates essentially ignore people of Hispanic background, who make up an increasing proportion of the population and who share a cultural and linguistic heritage different from the white majority. If Hispanics were treated as a separate group, the minority population would increase from 18.6 percent in 1977 to 22.1 percent in 1995 (Table 6).

TABLE 6

MINORITY POPULATION INCLUDING HISPANICS, 1977-1995

(Percent Distribution by Year)

	White	Black	Hispanic	Other
1977	81.4	11.8	5.1	1.7
1995	77.9	13.0	6.2	2.9

Source: CPR, P-20, No.329; P-25, No.704. Assumptions are that 90 percent of persons identified as Hispanic are from non-European backgrounds and that 10 percent (primarily from the Caribbean) are counted as blacks.

It should be noted that our population estimates, which are based on census tabulation and official immigration figures, surely miss a large portion of illegal aliens resident in the country, a significant number of whom are of Hispanic descent. Assuming that there are currently seven million illegal aliens in the country now and that an additional five million will enter during the 1980s, the minority population (including Hispanics) will rise from around 21 percent to 26 percent within the next decade. By the early 1990s, minorities will account for more than 30 percent of the population in the entry-level age groups (16 to 24 years old).

HOUSEHOLD/FAMILY CHARACTERISTICS

The maturing of the baby-boom group has coincided with some big changes in household formation and family living arrangements. The institution of marriage has been shaken by change. Since 1960 the percentage of young women who have postponed marriage has risen dramatically, as Table 7 shows. The postponement of marriage among young women does not seem to have had much of an effect on women over 30 since their never-married rates have risen by a relatively small amount. Another significant factor is the divorce rate, which has shot upward since 1960, especially among the young (Table 8). The increasing instability of marriage and the growing number of children born outside of marriage has deeply affected child-rearing arrangements, with a substantially larger portion of children

under 18 living with a single parent. In 1960 about one child in twelve lived with a single parent; in 1978 the number had risen to almost one in five.* In sum, we have seen a rise in the percentage of young singles and other non-family living arrangements and a fall in the share of traditional households made up of a married couple with children (Table 9).

TABLE 7

WOMEN NEVER MARRIED, 1960-1978

(Percent of All Women in Age Cohort)

Age	1960	1970	1978
18	75.6	82.0	86.4
19	59.7	68.8	76.2
20-24	28.4	35.8	47.6
25-29	10.5	10.5	18.0
30-34	6.9	6.2	8.4

Source: CPR, P-20, No. 338.

TABLE 8

DIVORCED PERSONS PER 1000 MARRIED PERSONS

	1960	1970	1978
All	35	47	90
White	33	44	83
Black	62	83	194
Under 30	23	38	91
30-44	33	47	108

Source: CPR, P-20, No. 338.

*CPR Studies, P-23, No. 84.

TABLE 9

HOUSEHOLD LIVING ARRANGEMENTS, 1960-1990

(Percent of All Households)

	1960	1970	1978	1990
Nonfamily	14.7	18.8	25.1	26.0
Single	13.1	17.1	22.0	20.5
Other	1.6	1.7	3.1	5.5
Unmarried couple	-	0.8	1.5	2.5
Family	85.3	81.2	74.7	74.0
Married couple, no children	30.3	30.3	29.9	26.5
Married couple, with children	41.4	40.3	32.4	34.0
One parent, with children	4.4	5.0	7.3	9.0
Other related individuals	6.4	5.6	5.3	4.5

Source: CPR, P-20, No. 340.

The changes affecting the family and household living arrangements are likely to ease up by the late 1980s as the baby-boom cohort joins the over-30 group. The percentage of all households that are single-person should fall after a two-decade increase (though nonfamily living arrangements will continue to rise, especially among young people). This will reflect the fact that those over 30 will still have a preference for marriage and, though the divorce rate will remain high, remarriage rates will be high as well. With many young couples who had postponed having children through their 20s and early 30s having at least one baby, the percentage of married couples without children will drop. Finally, the percentage of single-parent households with children will continue to rise, though at a slower pace since an increasing share of parents will marry and have children only after an extensive period of living together, which tends to lower the chance of divorce.

The increase in the number of single parents, the smaller number of children per family, the postponement of childbearing until after a career has been established, and the sharp rise in the cost of living have all acted to increase the percentage of children whose mothers are in the labor force. Table 10 shows the increase since 1970 in the working status

of mothers of all children and of those under 6. In both cases, the rise is dramatic and will probably continue to increase, though at a slow pace, through the 1980s. By 1990 about 58 percent of all children will have a mother in the labor force.

TABLE 10

CHILDREN WITH MOTHER IN LABOR FORCE, 1970-78

(Percent)

	1970	1978
All children under 18	38.8	49.8
Children under 6	28.5	40.5

Source: BLS, "Marital and Family Characteristics of Workers, 1970 to 1978," *Special Labor Force Report 219.*

THE LABOR FORCE

Two major factors will influence the labor force between now and 1995: the changing composition of the population and shifting participation rates. As the now mature baby-boom group (those born between 1945 and 1963) is fully absorbed into the labor market, the number of new entrants will decline markedly. Table 11 shows the large growth in the number of people between the ages of 35 and 54 and a sizable decline in those aged 16 to 24.

TABLE 11

POPULATION DISTRIBUTION BY AGE

	Population in Millions		Annual Average Percent Change	Percent Share	
Age	1977	1995	1977-1995	1977	1990
16-24	37.7	31.4	-1.0	26.7	19.0
25-34	34.6	40.0	+0.8	24.5	24.1
35-54	48.2	73.1	+2.3	34.0	44.1
55-64	20.9	21.2	+0.1	14.8	12.8
Total	141.4	165.7	+0.9	100.0	100.0

Source: CPR, P-25.

We can expect a sharp decline in the number of young workers. By 1990 the total number of labor force entrants in the 16- to 24-year-old age group will fall by 14 percent. There will be about a half million fewer labor force entrants from this age group annually at the end of the

1980s. Table 12 shows the percentage change in the number of new entrants into the *full-time* labor force in two key age groups--the 16- to 19-year-old group and the 20- to 24-year-old group. The decline in the number of 16- to 19-year-olds will be evident by 1985; the decline in 20- to 24-year-olds will be most dramatic in the late 1980s.

TABLE 12

YOUNG ENTRANTS TO THE FULL-TIME LABOR FORCE

(Annual Average
Percent Change)

Age Group	1977-1985	1986-1990
16-19	-2.8	-0.6
20-24	+1.6	-2.4
Total:	-1.0	-1.5

Source: CPR, P-20, No. 314, and P-25, No. 704; and BLS *Special Labor Force Report*, No. 200.

MORE FEMALE ENTRANTS

Participation rates, especially among women, have been rapidly increasing for over a decade and will probably continue to do so in the 1980s. In recent years, many women have taken jobs to pursue a career, maintain family living standards threatened by inflation, or support themselves and their children independently of a male breadwinner. These rates should continue to increase through the 1980s and 1990s, though female participation rates will not catch up to the male rates during this period (Table 13).

Despite growing equality of education and employment opportunities, smaller families, and an increased sense of sharing familial responsibilities, substantial difference between male and female rates persists

TABLE 13

LABOR FORCE PARTICIPATION RATES

(Participation as a Percent of All Persons over 16)

	Male	Female
1965	80.7	39.3
1970	78.3	43.3
1975	77.8	46.3
1977	78.0	48.7
1980	78.3	50.2
1985	78.9	52.7
1990	79.2	55.1
1995	79.2	57.5

for several reasons. Women with very young children still participate at a rate below average, and the number of babies born in the late 1980s (due to the large number of women of child-bearing age) will be relatively high. Further, the participation rate of all people over 65 is low, and in 1995 6.7 million more women than men are expected to be in that age group. Only 1 in 12 women over 65 is likely to be in the labor force--hence, lower overall female participation rates. Still, the increase in the number of women working will be substantial, as their overall participation rate rises from 62.4 percent of the male rate in 1977 to 72.6 percent in 1995. Over the same period, their share of the total labor force will jump from 40 percent to 44 percent.

THE OVERALL IMPACT

The rise in overall participation rates will not fully offset the impact of the population change, so that the rate of increase in the total size of the labor force will fall throughout the 1980s (see Table 14). Considering the slowdown in numbers of young entrants, we estimate that on average there will be three-quarters of a million fewer persons added to

the labor force each year during the 1980s. Viewed another way, annual employment growth will be half of what it has been in the past two decades.

TABLE 14

CIVILIAN LABOR FORCE

	Labor Force (in millions)		Rate of Increase (annual average)
1970	86.1	1971-75	2.3
1975	96.4	1976-80	2.3
1980	108.0	1981-85	1.6
1985	117.0	1986-90	1.3
1990	124.6	1991-95	1.1
1995	131.7		

MINORITIES

The sharp rise in the percentage of minority labor force entrants will be a development of major proportions in the coming years. Minorities, including Spanish-speaking aliens, currently account for about 22 percent of new labor force entrants. Because of higher immigration rates, the increasing number of Spanish-speaking undocumented workers entering the labor force, and the generally higher birth rates of minorities, they will account for close to 30 percent of new labor force entrants in the late 1980s.

All the numbers given on the labor force are projected from official labor force survey data, which are based on decennial census data. Adjusting these official numbers to take into account the presence of undocumented foreign workers who are primarily Spanish-speaking results in some modest changes. The overall growth in the labor force would be about 3.6 million workers more, and the total growth rate in the labor force would be about

0.1 percent higher per year. In terms of skills, these illegal immigrants tend to come with low skill levels and relatively poor educational backgrounds. In addition, Spanish-speaking immigrants change occupations much more rapidly than the average U.S. worker (or other immigrants). These illegal aliens will have dramatic impacts on specific subsections of the labor market (e.g., unskilled occupations, the labor market in the Southwest, or certain big cities in the Northeast).*

A MATURING WORK FORCE

While new entrants will be much scarcer in the 1980s, there will be a relative abundance of older, more experienced workers vying for middle-level positions in business organizations. As the first of the baby-boom age group reaches middle age around 1985, competition for middle-level, nontechnical positions will rise dramatically. For example, in the 1960s approximately 10 workers vied for each middle-management supervisory position. By the end of the 1980s, this ratio will increase to about 20 to 1. Many workers in this middle age group will be forced to accept jobs with status and pay scales below their expectations. Discontent among these older, experienced workers is likely to increase as they observe wages rising faster for lower-skill positions.

To deal with this middle-management excess, corporations will experiment with more diffuse organizational structures. We expect a big increase in such developments as flexitime, job sharing, and especially part-time work. Table 15 shows the increasing number of workers who will choose to do part-time work. Permanent part-time work will appeal to various segments of the job market in the 1980s: the employer who needs to attract workers who would not otherwise enter the labor force (e.g., older persons parents with young children, persons whose financial needs are limited); the worker from a household with two or more incomes and few or no children who might have the economic freedom to opt for more leisure rather than

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*U.S. Immigration and Naturalization Service, *Annual Report* and BLS, *Monthly Labor Review* "Occupation Change Among U.S. Immigrants," March 1978.

TABLE 15

PART-TIME WORKERS

(Percent of All Nonagricultural Workers)

	Part-time	Voluntarily Choosing Part-time
1960	17.3	13.3
1970	20.8	18.3
1977	22.1	18.7
1985	24.5	21.1
1995	27.0	23.3

Source: William Dentermann and Scott Brown, "Voluntary part-time workers: a growing part of the labor force," *Monthly Labor Review*, June 1978.

more pay; and the worker who puts a strong emphasis on self-fulfillment and who needs substantial amounts of time for his or her avocation. Recent studies have shown that a relatively large portion of the increase in women's participation rates comes from wives whose husbands already have incomes in the upper middle and upper ranges.*

Current surveys of the young show that positive attitudes toward work are declining but that nonmonetary rewards (i.e., "interesting work," "see the results of your work," "a chance to develop skills," "participate in decisions") are becoming more important.** The combination of the search for self-fulfillment, the new economic freedom of two household earners with

*Paul Rysauvage, "More wives in the labor force have husbands with above-average incomes," *Monthly Labor Review*, June 1979.

**M.R. Cooper, et. al., "Changing employee values: deepening discontent?" *Harvard Business Review*, January/February 1979 and G. Staines and R. Quinn, "American workers evaluate the quality of their jobs," *Monthly Labor Review*, January 1979.

few children, and the squeeze on middle-management promotions is likely to produce a large increase in the number of workers changing occupations or careers. Many people in their 30s and 40s are likely to be looking to find "the right job for me" or to find a smaller firm or a relatively autonomous branch of a larger firm.

The decline in the number of new labor force entrants during the 1980s will create a new economic environment. Increased investment will have to be substituted for labor force growth in order to maintain adequate growth rates. This is a major transition for an economy that has come to rely heavily on cheap and plentiful labor in the last few years. Table 16 points to the current increased reliance on cheap labor in contrast to the postwar pattern of growth depending on high rates of investment and productivity.

TABLE 16

PATTERN OF U.S. ECONOMIC GROWTH, 1948-1978
(Annual Rate of Growth)

	1948-73	1973-78
GNP (in 1972 dollars)	4.0	2.5
Business investment (in 1972 dollars)	3.9	1.4
Productivity (output per hour)	2.9	0.9
Labor force	1.4	2.3

The relative abundance of labor in the 1973-78 period has been dramatically reflected in a lowering in the relative cost of labor. Average weekly earnings of workers in private business rose at an annual rate of 1.9 percent in constant dollar terms between 1948 and 1973; they fell by 0.9 percent a year between 1973 and 1978. At the same time, there has been a much faster rise in the cost of capital equipment. between 1948 and 1973, producers' capital equipment rose on average at about the same rate as the GNP deflator; since 1973 it has been rising some 33 percent faster. In addition, the sharp escalation in overall inflation rates and in interest rates has increased the amount of uncertainty attached to longer-term investments. Thus, at least

since 1973, labor has been seen as a relative bargain compared to other productive inputs.

The pattern of growth evident in the last few years will not be dominant in the future. We have already seen that there will be a major shift in the availability of new labor force entrants. Other key factors that will influence economic change during the 1980s include energy, inflation, government policy, and investment.

KEY FACTOR: ENERGY

The energy situation, of course, will be a critical variable in determining the likely course of the economy. While there may be temporary periods of shortage, over the longer run energy will be available--but at very high prices. The price of benchmark Saudi crude, for example, will rise at an annual average rate of 6 percent above the average rate of U.S. inflation. This rapid rise in the relative cost of energy will contribute substantial inflationary pressures to the economy throughout the 1980s.

KEY FACTOR: INFLATION

Spurred on by energy prices, inflation will be high, averaging almost 8.0 percent per year through the 1980s. This implies several bouts with double-digit inflation in 1979-1980 and again in mid-decade. It also implies, however, that the inflationary spiral will not get worse during the decade.

One reason the inflationary spiral is not expected to continue to accelerate is the havoc that it will create with family budgets. Table 17 suggests some major discrepancies among various budget items likely to be experienced by the consumer. The relatively large increase in certain necessities--home purchases, medical care, gasoline, and home heating--will produce a continuing popular concern about inflation. Figure 2 indicates that current inflationary expectations are at a peak. The high level of inflationary expectations are mirrored in the public's concern over inflation as the critical economic issue that the government must face: in recent polls, two out of three people have identified inflation as the most serious

TABLE 17

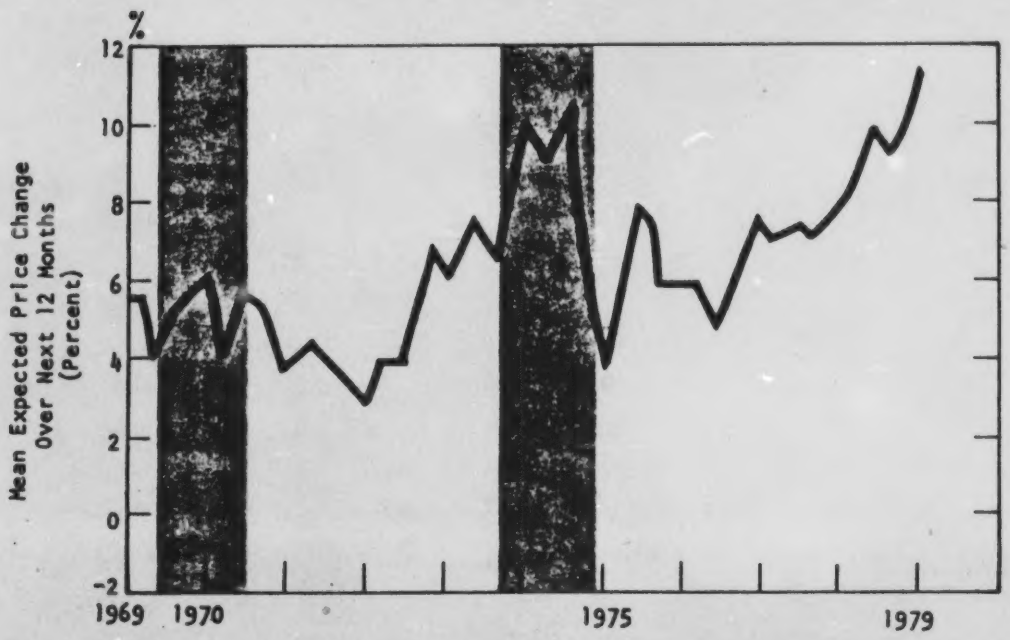
RELATIVE INFLATION RATES, 1979-1990
(Annual Average Percent Increase)

Consumer price index, Total	8.0
Food	7.8
Apparel	6.0
Home purchases	9.0
Home furnishing	6.9
Automobiles	6.7
Personal care	6.3
Medical care	9.1
Recreation	7.2
Gasoline	14.0
Home heating	13.5

economic problem for the United States. This has already had a dramatic effect on the government's role in the economy and will continue to influence government policy throughout the 1980s.

FIGURE 2

INFLATIONARY EXPECTATIONS



Indicates recession periods as designated by the National Bureau of Economic Research, Inc.

KEY FACTOR: GOVERNMENT POLICY

The manner in which the government responds to the current economic situation will be critical. Most candidates for public office, from president through town councilor, are expressing concern about inflation. And while little can be done to mitigate the impact of higher energy prices on the economy, there are longer-term signs that government is taking appropriate actions to reduce the inflationary forces over which it has some control.

Recent appointments to the Federal Reserve Board indicate that through the early 1980s monetary policy will give strong priority to longer-term price stability. Government spending continues to grow more slowly th overall GNP. In fact, the Congressional Budget Act of 1974--which forced Congress to set targets for overall receipts and outlays before deciding on any detailed spending programs--continues to have an almost revolutionary impact. Since its full implementation in 1976, government purchases of goods and services in constant dollars have been growing at about one-third the rate of real GNP; and despite an expected growth in real spending on defense, this trend should continue over the next five years. The recent successful experiments with deregulation in the airline industry are opening up real possibilities of change in other transportation areas, communications, banking, and insurance. Finally, growing public concern over productivity and investment has already produced the 1978 Revenue Act, which lowered the tax rate on corporate income and capital gains and expanded modestly the investment tax credit. Additional tax benefits for business investment (such as improved accelerated depreciation schedules) are likely by the early 1980s. Government policies of this kind should reduce the push that the government sector was giving to inflation in the 1960s and 1970s and should create a more positive attitude for business investment and productivity gains.

KEY FACTORS: INVESTMENT

The climate for business investment is shrouded with uncertainties: the availability and cost of energy, inflation, the future course and cost of health care, environmental regulations, and the long-term outlook for consumer

spending. But the more positive incentives that the government will offer for new investments will help, as will a loosening of regulations in certain areas. If there is any sizable reduction in the rate of inflation in the early 1980s, we can expect business investment to be of critical importance in leading the economic recovery and providing an underpinning for the real growth that we will have during the 1980s.

MACROECONOMIC CONDITIONS IN THE 1980s

It will be some time before the price spiral will be contained. It will probably take about two years of economic slowdown before there is a decided drop in the rate of price increase. The economic slowdown, especially as it spreads to other industrial countries, will affect the markets for energy goods and moderate the inflationary impact of high crude oil costs; it will slow the inflationary pressures coming from some key societal bottlenecks where skilled labor is in short supply; and it will gradually stabilize the inflationary expectations of both consumers and business people.

In the longer run, government policy, especially policy intended to create a better environment for business, should contribute to a substantial increase in business investment. This will be important as the rate of increase in new labor force entrants drops. Finally, a revival of consumer confidence in a relatively stable climate should produce a period of moderate expansion through the mid-1980s.

Overall, the 1979-90 period will average a 2.7 percent annual increase in real GNP and a disturbingly high inflation rate of almost 8 percent. The pattern of economic growth will be very different from that of the 1970s in that investment, increased productivity, and technological innovation will play a more important role than labor force growth. Table 18 compares the pattern of growth in the 1980s with that of the 1970s.

Moderate GNP growth rates despite the fall in labor force growth should lower, to some extent, the chronically high unemployment rates of the 1970s. While unemployment averaged 6.2 percent per year during the 1970s (with an annual average of 8.5 percent in 1975), it should fall over the decade to

an average of around 5.3-5.5. There still will be a high peak of some 8 percent in the early 1980s, and unemployment among certain select groups (e.g., inner-city black teenagers) will be very high.

TABLE 18

PATTERN OF U.S. ECONOMIC GROWTH, 1973-1990
(Annual Rate of Growth)

	1973-78	1979-90
Real GNP	2.5	2.7
Real Business Investment	1.4	4.0
Productivity	0.9	3.0
Labor Force	2.3	1.3

SOCIETAL EXPECTATIONS

Public confidence in major societal institutions fell sharply during the late 1960s and continued low through the 1970s (see Table 19). This fall in confidence coincided with the failed promises of the 1960s regarding full employment, a fine-tuned economy, and a successful "war on poverty," as well as large-scale publicity about leadership failures such as Watergate, bribery, and bugging. Increasing confusion about our role in world affairs paralleled the growth of Soviet military power, the Vietnam debacle, the decline in the value of the dollar, and our growing dependence on foreign oil. The inability of either the public or private sector to resolve the economic issues of relatively slow growth and high rates of inflation was obviously the single most important variable in the general lack of confidence in traditional leadership.

TABLE 19

PUBLIC CONFIDENCE IN MAJOR INSTITUTIONS

(Response to question: Would you say you have a great deal of confidence in people running the following institutions?

	1966	1978
Congress	42	10
Federal Executive Branch	41	14
Major Corporations	55	22
Labor Unions	22	15

Source: Louis Harris and Associates

GOVERNMENTAL EXPENDITURES

It is likely that the relatively poor performance of the economy in the 1980s will keep the public's regard for government low. A major indicator of this attitude is the most direct measure of government involvement in society: total government expenditures as a percent of GNP. (Total government expenditures includes all levels of government--federal, state, and local--and all forms of spending, both purchases of goods and services and transfer payments, interest payments, and subsidies.)

Total government expenditures as a percent of GNP rose dramatically during and after the Korean War as defense spending rose from its post-World War II low. Total expenditures then held steady until the mid-1960s, when they rose from about 27 percent of GNP in 1965 to 35 percent in 1975. Most of the increase in expenditures reflected the cost of the Vietnam War and the social programs associated with the 1960s: new forms of welfare assistance, better coverage under social security, and a rise in the number of eligibles. Also, the baby-boom group produced a massive increase in spending on postsecondary education.

Since 1975, however, there have been signs of a substantial reversal in this trend. The primary forces behind this stabilization are new public attitudes. With continued high inflation rates impacting every cost from food to fuel to housing, the American middle class--growing more doubtful about the efficiency of many big government programs--has responded with fiscal toughness. The visible signs of this attitude shift have already appeared in the Congressional Budget Act of 1974 and the popular votes supporting Propositions 13 and 4 in California (placing limits on property tax and total government spending). Table 20 shows that from its peak in 1975, government expenditures as a percent of GNP have already begun to fall.

During the 1980s, government's share is expected to fall even further due to such changes as a standardization of welfare payments, an increase in charges for medicare and food stamps, and a leveling off in education expenditures. Perhaps most importantly, the political and economic rise

TABLE 20

THE SIZE OF THE GOVERNMENT SECTOR

(As a Percent of GNP)

	Government Purchases of Goods and Services	Total Government Expenditures*
1950	13.5	21.3
1955	18.8	24.5
1960	19.8	27.0
1965	20.1	27.3
1970	22.3	31.8
1975	22.2	35.0
1979	20.0	31.7
1985	18.5	30.0
1990	18.5	30.0
1995	20.0	32.0

*Includes transfer payments, net interest paid, and net subsidies.

Source: Commerce BEA "National Accounts," *Survey of Current Business*, various editions.

of the conservative sunbelt states will ensure a substantial anti-big government bloc in Congress. The southern and western states are projected to have a majority of Congressional seats after the 1980 census is tabulated.

By the late 1980s, we expect the fiscal conservatism movement to have slowed a bit; pent-up pressures for more government support in critical areas--health care and the cities in particular--should boost the share of public spending once again to at least current levels.

THE WORKPLACE

In addition to decreasing confidence in government, the public seems to have suffered some deterioration in job satisfaction during the 1970s, although this trend is neither as strong nor as clear-cut. Periodic surveys have shown a statistically significant fall in workers' perception of

job satisfaction--both as an overall measure and in five of six specific areas of concern (comfort, challenge, financial rewards, resource adequacy, and promotions). The fall is particularly noticeable between 1973 and 1977 (Table 21).

TABLE 21

JOB SATISFACTION INDICATORS, 1969-1977

	1969	1973	1977
General satisfaction values	3.75	3.79	3.66*
Specific values: Average	3.24	3.20	3.05*
Comfort	3.14	3.03*	2.87*
Challenge	3.26	3.21	3.06*
Financial reward	3.06	3.10	2.89*
Relations with coworkers	3.41	3.34	3.40
Resource adequacy	3.45	3.44	3.28*
Promotions	-	2.63	2.46*

Source: Survey Research Center data reported in *Monthly Labor Review*, January 1979. The index is a composite of positive responses to questions on R. Quinn and G. Staines, *The 1977 Quality of Employment Survey*, Institute for Social Research.

*Statistically significant changes.

But the evidence on growing job dissatisfaction is not simple to interpret. Although there are some signs that workers feel their current skills are being underutilized on the job (e.g., in 1967 27 percent of workers interviewed felt they had skills that were not being fully utilized; by 1977 this percentage had risen to 36 percent), at the same time, there was no evidence that workers felt that overeducation was increasing. In the 1977 survey, a large majority of workers (69 percent) agreed that their jobs required "a high level of skill" and an overwhelming number (83 percent) that their jobs required them to "keep learning new things."* Further,

*"Workers Evaluate Their Employment," *Monthly Labor Review*, January 1979, p. 9.

evidence from the same time period as the surveys indicates that labor turnover rates have actually fallen. For example, in the three years around 1969 (1969-70) labor quit rates averaged 2.4 per hundred workers per month; in the three years around 1973, 2.4; and in the three years around 1977, 1.9.*

Several factors in the 1980s could contribute to changing workers perceptions about their job and the role of work in their lives. Fewer new workers will enter the labor force during the 1980s and the early 1990s; an increasing portion of the labor force will be accounted for by the 24- to 44-year-old age cohort. There will be a noticeable squeeze on the hierarchical ladder as more and more middle-level managers will find opportunities for advancement limited.

This middle-management crunch will coincide with important changes in the household and familial characteristics. The trend toward having at least two earners in a household has been a strong one for two decades and will continue to grow in the 1980s. The number of families with more than one worker in the labor force rose from 43 percent in 1960 to 53.1 percent in 1970 to 62 percent in 1978, and should increase to almost 70 percent in the early 1990s.** Further, since each family is likely to have fewer children than in earlier years, each household will have much greater flexibility in dealing with job dissatisfaction. It will be much easier for an individual worker to choose to switch jobs or even careers with fewer dependents and another earner in the household. Or an individual worker may find it convenient to move to a part-time work schedule.

With fewer new workers coming into the labor force, employers will have greater incentive to be flexible and meet the needs of workers. Thus, increasingly during the 1980s, we anticipate that there will be much more use of part-time workers, flexitime schedules, much greater opportunities for job training and retraining, and an increased tendency for career changes.

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*BLS *Handbook of Labor Statistics*, Table 54.

**BLS *Handbook of Labor Statistics*, Table 27.

EDUCATION

The education system has experienced major shocks during the 1970s, in both quantitative and qualitative terms. Demographic changes have led to declining enrollments while a variety of population and social factors have had important impacts on perceived quality of education.

ENROLLMENT

The number of people in each age group enrolled in school will go through considerable fluctuations over the next 15 years. These fluctuations will result from two different factors: the change in the absolute size of various age groups and the percentage of each age group enrolled in schools. Table 3 shows the variance in the size of the key school-age groups, with particularly sharp declines in the numbers of younger children in the late 1970s, of teenagers in the mid- and late 1980s, and of young adults in the late 1980s and early 1990s.

These population declines will be offset to some degree by increases in enrollment percentages. Table 22 shows the percentage of population in each age group enrolled in school. The major changes anticipated include a steady increase in the number of children under 5 included in preschool programs; an increase in college attendance among the 20- to 24-year-old age groups, especially among white females and blacks of both sexes; and some continued increase in the number of adults who go back to school to finish a degree program, for career retraining, or for a broadening experience. The anticipated numbers of students enrolled between 1970 and 1995 are presented in Table 23.

TABLE 22

ENROLLMENT PERCENTAGES, 1970-1995

(percent of civilian non-institutionalized population enrolled in the regular* school system)

Age	1970	1977	1985	1995
0-5	21.6	26.7	31.2	38.1
6-13	99.1	99.4	99.4	99.4
14-15	96.8	98.5	98.5	98.4
16-17	90.0	88.9	88.9	89.0
18-19	47.0	46.2	46.4	46.7
20-21	31.1	31.7	34.0	36.1
22-24	15.6	16.5	17.8	19.3
25-29	7.6	10.9	11.5	12.3
30-34	4.2	6.9	6.7	6.6
35+	1.0	1.6	1.6	1.6

*Regular school: public and private nursery schools, kindergartens, elementary schools, high schools, colleges, universities, and professional schools. Students on full- and part-time basis are included.

The pattern of decline in enrollment will have a differential impact on different types of schools. Table 24 shows the anticipated numbers enrolled by type of school between 1970 and 1995. An enrollment decline does not show up for preschool and kindergarten programs because of the expanded attendance of 2- to 4-year-olds; the decline, already in evidence in elementary schools, should continue until the mid-1980s when the impact of the echo boom is felt; high school enrollments should fall throughout the 1980s, as should college enrollments in the 1990s.

TABLE 23

NUMBERS ENROLLED IN SCHOOL,
BY AGE, 1970-1995
(in thousands)

Age	1970	1977	1980	1985	1990	1995
0-5	4670	5109	5741	7225	8298	8523
6-13	33262	29396	27519	26767	30039	32090
14-15	7901	8242	7514	7282	6946	7475
16-17	7066	7576	7358	6313	5717	6527
18-19	3374	3814	3847	3301	3244	3063
20-21	1945	2542	2652	2631	2481	2223
22-24	1488	1918	2116	2223	1985	1974
25-29	1060	1975	2161	2432	2467	2235
30-34	493	1075	1199	1323	1411	1388
35+	860	1485	1551	1695	1855	2037
Total	62119	63132	61633	61192	63833	67535

[redacted] Enrollment decline of more than 2 percent from preceeding period

TABLE 24

NUMBERS ENROLLED IN SCHOOL,
BY TYPE OF SCHOOL, 1970-1995
(in thousands)

Type of School	1970	1977	1980	1985	1990	1995
Preschool and Kindergarten	4406	5026	5637	7060	8133	8395
Elementary, Grades 1-8	34340	[redacted]	[redacted]	[redacted]	30618	32740
High School, Grades 9-12	14898	16152	[redacted]	[redacted]	[redacted]	14380
College	8475	11843	12516	12651	12474	[redacted]
	62119	63132	61633	61192	63833	67535

One other notable feature will be the increase in the portion of minority students (Table 25). The greater share among elementary and high school students is due to the younger age structure of the minority population and higher birth rates among minorities. An additional factor increasing the minority population at the college level is a continuation of the "catching-up" to white rates of college enrollment; this catching-up phenomenon has been in evidence throughout the 1970s. In addition, the percentage of another identifiable minority, the Spanish-speaking students, is high in certain regions of the country and will grow rapidly during the 1980s as well.

TABLE 25

MINORITY PROPORTION OF SCHOOL ENROLLMENTS
(percent of all students that are non-white)

	1977	1995
Elementary	17.5	19.4
High School	16.9	21.0
College	14.3	18.7

EDUCATIONAL PROBLEM AREAS

Two areas will cause serious concern in regard to education in the decade of the 1980s: The declining quality of education in general and the serious discrepancy in academic achievement between the high-performance and the low-performance groups.

The Declining Quality of Education

Over the last 16 years, the traditional yardstick of what high school students across the country have learned--national standardized tests--has

shown a pervasive, steady decline. While there is considerable controversy over the validity of such tests and widespread acknowledgement that students learn things not measured, these tests are important indicators of change.

The most important measure of achievement over the last two decades has been the Scholastic Aptitude Test (SAT). The SAT has been used since the 1920s to help determine high school students' apparent preparedness for college. About one-quarter of all people in the relevant age group take the exam each year. The scores on this test have been declining steadily since 1963 (Figure 3). A broad range of standardized achievement tests have shown similar results. A summary of these test scores concludes that since 1965:

> Score declines have been observed in so many different groups and so many tested areas that serious attention must be devoted to them. The declines have not been large in any given year, but they have been quite consistent over time, area, and group.*

A number of factors have been used to explain the decline in test scores, including: changes in the test-taking population, social change, and changes in the schools.

Changes in the test-taking population. A portion of the decline in the test scores can be attributed to the expansion of the test-taking population during the 1960s. Increasing open enrollment policies in some colleges and the expansion of two-year colleges meant that the percentage of high school graduates going on to college rose rapidly during that decade--from 42.4 percent in 1960 to 52.2 percent in 1970. Several groups that traditionally had low test scores were making up a larger share of those taking the standardized college entrance tests: lower socioeconomic groups; women (who tend to average more than 50 points lower than men on the mathematics section); and minorities (who average

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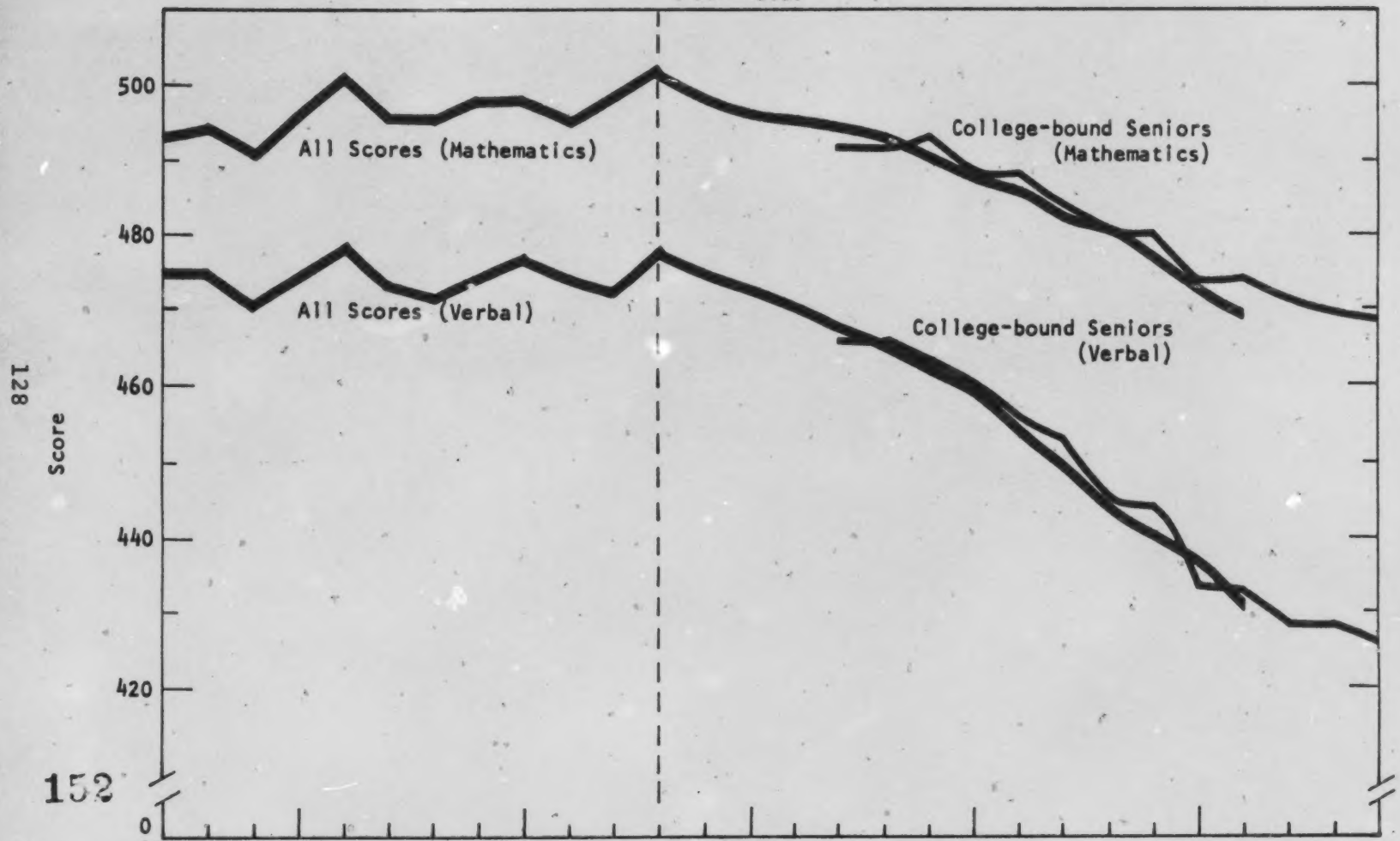
*College Board and Educational Testing Service, "Summary of Score Changes (in other tests)," prepared as an appendix to *On Further Examination: Report of the Advisory Panel on the SAT Score Decline*. See also the work done by the National Assessment of Education Progress.

FIGURE 3

SCHOLASTIC APTITUDE TEST SCALED SCORE MEANS
(1952-1979)



Source: College Entrance Examination Board

100 points lower on both the verbal and math sections).*

But the change in the composition of the test-taking population can explain only a portion of the score decline: by 1970 the increases in the number of young people actually taking the test had leveled off and the relative portions of lower socioeconomic groups, women, and minorities taking the tests stopped growing. Yet the trend toward lower scores continues.

The decline in test scores does not merely reflect a general lowering of scores, but also shows markedly smaller numbers of high-scoring students. Table 26 shows the percentages of students scoring above 600 on the SAT from 1967 through 1979. The decline in high scores has continued though the rate of decline seems to have slowed in the mid-1970s.

TABLE 26

HIGH-SCORING CANDIDATES, 1967-1979

(percent of all test scores over 600)

	Verbal	Math
1967-69	12.1	17.9
1970-72	11.4	17.5
1973-75	8.7	16.1
1976-79	7.9	15.7

Societal changes. A number of pervasive changes in society have understandably affected children's performance in the schools, most notably changes in the family and the growing influence of television.

*"The SAT Score Decline: A Summary of Related Research," Appendix to *On Further Examination:*

The traditional family has undergone major changes since the early 1960s. During the last 15 years, we have witnessed the rise of the singles movement, skyrocketing divorce rates, record low birth rates, the postponement of marriage, and the proliferation of alternatives to marriage. We have seen the number of children under 18 living in single-parent families double between 1960 and 1977 and the number of children in families with a mother working rise sharply. This suggests an increasing number of children who are now left in day-care centers, with baby-sitters, or by themselves. They are spending less and less time talking with their parents and doing homework under parental supervision.

With the exception of the family, the factor most often cited as influencing, positively and negatively, the quality of education is the impact of technology. That verbal scores have decreased even more sharply than math scores (and that the area of competency in math in which students are weakest involves problem solving in a verbal context) has led to a search for factors that specifically affect reading and writing skills. While no studies have proven conclusively that watching television, for example, has contributed to illiteracy, certain facts are striking. The average American child between the ages of 5 and 18--who spends about 11,580 hours in school--will spend approximately 15,000 hours watching TV. TV viewing tends to reduce the amount of reading, substitute learning from pictures for learning from print, and reduce homework time. Other factors being equal, higher than average viewing tends to be associated with lower-than-average test scores.*

Changes in schools. A large part of the public blame the schools for the decline in quality of education. Table 27 shows

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*Wilbur Schramm, "Television and the Test Scores," Appendix to *On Further Examination*.

the results of a periodic survey of the public's grading of the public school system. The decline in public confidence in schools reflects the fall in confidence in institutions in general, but there are some special factors in the school situation.

TABLE 27

PUBLIC FEELING ABOUT LOCAL SCHOOLS

(in response to question: What grade would you give to the public schools in this community: A,B,C,D or F?)

	Percent of Total					
	A	B	C	D	F	Don't Know
1974	18	30	21	6	5	20
1979	8	26	30	11	7	18

Source: Gallup Polls of Attitudes Toward Education.

Several critics have cited the activities of the teachers themselves and the influence of collective bargaining agreements as possible contributing factors to the pervasive score decline in recent years. Collective bargaining agreements have served to limit the actual number of hours a teacher spends in the classroom, and hours lost due to strikes and walk-outs became more significant during the late '60s and early '70s.

TABLE 28

TEACHERS' STRIKES

ANNUAL AVERAGE PERSON-DAYS LOST THROUGH WORK STOPPAGE

1963-66	2[illegible]893
1972-73	1,350,000

Source: BLS *Handbook of Labor Statistics.*

Increased racial tension and increased violence in the schools have been considerable distractions for already apathetic students--as have alcohol and drug problems. The increase in students' negative attitudes toward school throughout the '70s has paralleled a lack of respect for the institution and a general decline in the belief that what school offers is of value.

Changes in curricula have naturally paralleled these other movements in the schools. Both what is taught and how it is taught have changed substantially over the past 15 years--in ways that may not necessarily prepare students for standardized achievement testing.

A special study of textbook language and structure commissioned by the College Entrance Examination Board contends that although SAT verbal questions are still written on an eleventh to twelfth grade level, texts now commonly used at those grade levels were in fact written for ninth or tenth grade reading levels.*

Studies of both California and Massachusetts schools have demonstrated the falloff in enrollments in basic English courses when other electives and specialty courses are offered. There are many reasons more electives have been offered: in an attempt to interest unmotivated students, to offer courses more "relevant" to personal experience, or to respond to the needs of special groups (non-English speaking, the handicapped, different ethnic groups).

Discrepancies in Achievement

Throughout the overall average score decline in this period, the disparity in academic achievement between certain population groups has

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* Jeanne Chall, "An Analysis of Textbooks in Relation to Declining SAT Scores," *On Further Examination.*

remained constant. This achievement gap has been well documented and a number of groups and locations have been identified that are associated with lower than average academic scores.* These groups or locations include:

- individuals whose parents have limited education
- blacks
- Hispanics
- school districts in aging central cities
- school districts in extreme rural areas
- school districts with a high proportion of AFDC clients

In most achievement test programs, the test scores of each of these population groups declined in successive assessments at about the same rate as the nation and thus remained below the national average.** The only exception in the pattern was a steady relative improvement in the performance of groups in school districts in extreme rural areas.

FUTURE TRENDS IN EDUCATIONAL ACHIEVEMENT

Several of the indicators that have been most closely linked to the decline in scores on standardized tests are likely to remain a negative influence. The number of single parent families is likely to grow, as is the percentage of children whose mother is working. The relatively slow growth in the economy will assure that a large number of families with children will remain with limited incomes. The mood of fiscal conservatism will constrain the amount of funds that school districts can spend on keeping teachers' salaries up to the level of inflation, much less on upgrading their programs.

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*See the scores of population groups in the achievement tests of the National Assessment of Educational Progress (NAEP), or of individual school districts as reported in state studies like California, Department of Education, California Assessment Program.

**See *Three Assessments of Scores: Changes in Achievement*, NAEP, 1978.

Consequently the militancy of teachers should remain high. There is no evidence that the amount of time children spend watching TV will fall. And societal problems like inflation, energy shortages, and the U.S. international role promise to keep environmental uncertainties high.

There are several factors pointing to change; at least some of which might have a positive impact on schools. Poll data show that societal concern over schools is high. Such concern is behind much of the push for competency testing and a curriculum focus on basic skills. The movement has generated a lot of interest on the part of the public and activities related to basic education by school administration. The National School Board Association has indicated that at least 70 percent of their member school district representatives have expended some effort in consideration of back-to-basics issues. Twenty-six percent have amended their curricula to increase time spent on basic subjects and an additional thirty percent have been considering basics-oriented curricula.

Central to the objectives of the basic skills movement is the development of proficiency standards to determine attainment of basic literacy. The related movement over the last few years to required competency testing at certain grade levels and as a prerequisite for graduation epitomizes the back-to-basics movement. Thirty-four states have taken some action regarding setting levels of minimal competency over the last five years. Although testing programs of this nature have encountered opposition from organized teachers groups, the public strongly favors these moves as a way of assuring accountability and resisting the devaluation of a high school diploma.

In addition, a change in attitude is being noted in students themselves with recent polls of college freshmen showing a much more practical approach to education in terms of using it to learn specific job skills. Between 1968 and 1978, the preference of entering college freshmen for careers in business almost doubled (from 11 percent to 19.3 percent).*

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*Cooperative Institutional Research Program, UCLA, *The American Freshman: National Norms.*

Careers in the professions (health, law, and engineering) went up from 18.5 percent in 1968 to 21 percent in 1978. In the meantime, career preferences in school teaching and social work, and for full-time homemaking dropped sharply. These two factors, a growing public concern for basic standards of achievement and a growing concern on behalf of the students for practical education achievement, could act to slow or stop the long decline in test scores.

Still the chances for near-term improvement, especially in narrowing the discrepancies among population groups, do not appear imminent. The negative trends forecast for the 1980s (more single-parent families, more mothers working, less government spending on education, slow growth in public social spending, etc.) are likely to affect these groups much more than the overall national average. Thus, in the decade of the 1980s, we can look forward to a leveling off in the decline in average student achievement on standardized tests. But the discrepancy between the best-performing and the worst-performing is likely to widen, and the percentage of children in low-performing groups may grow.

PART II

IMPLICATIONS FOR VOCATIONAL EDUCATION

The trends in the external environment discussed in Part I will have an important impact on vocational education in the next 15 years. This part of the report examines some of the changes that might be expected. Section 1 identifies the external factors that will have the greatest impact on vocational education. Section 2 analyzes the expected changes in population groups that make up the potential clientele for vocational education. Section 3 discusses the policy implications for planners in vocational education.

EXTERNAL FACTORS FOR CHANGE

Each of the changes in the external environment described in Part I could create new problems or opportunities for vocational education. The most important of these factors include:

DEMOGRAPHY

- Between 1977 and 1985 the relative number of young people between the ages of 16 and 24 will drop sharply.
- At the same time, there will be a rise in relative share of the population in several other age categories, notably those aged 35 through 44 and those 65 and over.
- The relative number of minorities among the younger age groups will be increasing, especially if Hispanics are considered as a minority. The illegal alien population, which will number about 10 million people in the early 1990s is primarily young and Hispanic.
- The relative number of single-parent families will rise. Because of their increase and because of the growing number of households that depend on two earners, the share of children with a mother in the labor force will rise to almost 60 percent.

THE LABOR FORCE

- Fewer young workers will enter the labor force as the population between the ages of 16 and 24 declines.
- Questions of quality of young labor force entrants may arise as overall achievement scores decline and a larger portion come from disadvantaged population groups.

8. STRONG FUTURE COMPETITORS

Two-year colleges have already proven themselves an especially attractive source of vocational/occupational education for anyone over age 24, especially those seeking part-time training. As the numbers in this age group grow, two-year colleges should prosper.

To meet its personnel quotas, the armed forces must recruit a larger portion of the shrinking young adult group. Prime targets will be young adult males who have only a high school diploma. Thus, there is a real need to integrate the needs and objectives of the armed forces into any comprehensive long-term planning efforts in the field of vocational education.

Finally, businesses are likely to become even stronger forces in vocational/occupational training. Many more companies are likely to be offering employees opportunities for retraining or upgrading skill levels--particularly as young labor market recruits become harder to find, as longer-term employees show more dissatisfaction with their current jobs, and as sophisticated new technologies offer more efficient ways to accomplish certain tasks. We expect a substantial increase of in-house training programs, which will be in direct competition with other vocational education programs. But we can also expect to see an increase in tuition-aid programs and many more business-vocational school joint enterprises.

9. CURRICULUM DEVELOPMENTS

Factors implying a need for curriculum adjustments include: new programs for changing technological needs, increased sensitivity to changing age, sex, and ethnic composition of the vocational education population; more part-time participants; and more training designed for disadvantaged groups. The most important curriculum change may result from the growing cooperation between business and the vocational education establishment.

- Women will make up an increasing proportion of the work force. A larger share of this group will be made up of older women re-entering the labor force.
- There will be a further shift toward part-time work as more two-earner households opt for greater job flexibility.

THE ECONOMY

- As labor force growth rates decline, business will become more dependent upon effective use of capital. This implies more capital used per employee, better-trained employees, and possibly more in-house training.
- Employers will have a harder time recruiting skilled workers and are likely to look at relatively untapped groups for new employees; older persons, women who have been out of the work force, the handicapped, part-time workers, etc.
- Increasing inflation implies that cost of specialized vocational education training programs will rise rapidly. Specialized vocational programs that do not tie directly into a particular occupational need may run into economic difficulties.
- Anticipated real growth rates of almost 3 percent a year imply the spread of affluence. The number of households earning over $25,000 in constant dollars will double by the 1990s (most of the increase will be in young, two-earner households). More money will be available for specialized education.
- Businesses taking advantage of growing affluence may be in a better position to spend money on employee benefits, like education and retraining.

SOCIETAL EXPECTATIONS

- With the growing force of fiscal conservatism, less public money will be available for vocational education. It is likely that total public funds spent on vocational education will rise at a rate slower than the growth in nominal GNP.

- Increased dissatisfaction at work will spur demands for extra benefits. Among these benfits are likely to be tuition aid and retraining programs.
- Employers will become much more flexible. We are likely to see more decentralization of responsibility at the workplace, more autonomous work groups, and greater use of flexible working hours.

EDUCATION

- College attendance of the traditional student--the 20- to 24-year-old full-time attendee--will fall dramatically between now and 1995. This means that to retain enrollment levels, many colleges will seek to attract older, part-time students.
- Postsecondary education will have a greater concentration of older students in their 30s and 40s interested in career or occupational change.
- With decreasing enrollments, postsecondary schools will be even more aggressive in going after students that have usually been underrepresented: blacks, Hispanics, residents of aging central cities and rural areas, and older students.
- Some postsecondary schools may find it advantageous to cooperate with local businesses on in-house training or educational contracts.
- Public satisfaction (or dissatisfaction) over the quality of education will be an important consideration in the 1980s and could have a dramatic impact on curriculum and public funding support.
- The armed forces will provide a larger portion of all postsecondary training.

KEY POPULATION GROUPS

Most of the changes in the external environment that will affect vocational education, will have differing impacts on specific population groups. We have identified changes in 12 population groups that are likely to have the most dramatic effect on vocational education in the next decade and a half.

1. THE YOUTH GROUP (AGED 16-24)

The number of young people between the ages of 16 and 24 will drop considerably in the next 15 years. Since this age group has traditionally accounted for the bulk of the students in full-time vocational training, the implication is that the vocational schools dependent on younger full-time students will face a major increase in competition for a smaller student pool.

TABLE 29. POPULATION: 16-24

	In Thousands	Percent Change
1977	37,713	
1985	35,572	- 5.7
1995	31,398	-11.7

2. ADULTS (AGED 35-54)

Tables 30-33 show that the number of adults between the ages of 35 and 54 will increase substantially between 1977 and 1995 though the timing of the jump differs significantly from group to group. The 35- to 44-year-old age group will experience a big jump throughout the 1980s while the 45-54 group will show a substantial increase only after 1990. Persons over 35 have traditionally accounted for about 30 percent of postsecondary vocational educational students, and of these, less than 10 percent are enrolled full-time. Besides being the fastest-growing population group, these individuals

should experience a rise in the rate of career/occupation change. Both factors will mean that this group will account for a much more significant portion of vocational education students and that the portion of vocational educational students participating in part-time programs will increase.

TABLE 30. MALES: 35-44

	In Thousands	Percent Change
1977	12,153	
1985	16,258	+33.8
1995	20,901	+28.6

TABLE 31. MALES: 45-54

	In Thousands	Percent Change
1977	11,761	
1985	11,353	- 3.5
1995	15,634	+37.7

TABLE 32. FEMALES: 35-44

	In Thousands	Percent Change
1977	12,170	
1985	16,166	+32.8
1995	20,685	+28.0

TABLE 33. FEMALES: 45-54

	In Thousands	Percent Change
1977	12,139	
1985	11,627	- 4.2
1995	15,916	+36.9

3. ADULT WOMEN NOT YET IN LABOR FORCE

Prime candidates for vocational training will be found among the large number of women between the ages of 25-54 who are entering or re-entering the labor force. These women will be participating in the labor force and

enrolling in school at much higher rates (Tables 34-35). Not only will a large number of women be entering or re-entering the labor force each year, but many of these women will be seeking some type of career education. In addition to the greater number of women in these age groups, their labor force participation will be rising, increasing their interest in a variety of vocational programs. Thus, the portion of women over 25 in vocational education programs should increase as well.

TABLE 34. FEMALES OVER 25:
LABOR FORCE PARTICIPATION RATES

	1977	1995
25-29	62.9	71.2
30-34	58.6	70.2
35-44	59.6	75.0
45-54	55.8	68.3

TABLE 35. FEMALES OVER 25:
ENROLLMENT IN SCHOOL
(In Thousands)

	1977	1995	Percent Change
25-29	840	1,033	+19.0
30-34	527	675	+28.1
35+	899	1,221	+35.8

4. ADULT WOMEN IN THE LABOR FORCE PART-TIME

Another factor that marks adult women as prime candidates for a major increase in vocational education participation is the high share of women in part-time jobs. While many of these women have other out-of-job responsibilities (e.g., child care), their increasing interest in pursuing careers and earning an income creates a unique opportunity at some point for part-time vocational/occupational training courses.

TABLE 36. FEMALES: 25-54

PART-TIME EMPLOYMENT

(percent of all workers)

1977	18.6
1985	22.0
1995	23.5

Source: "Voluntary Part-time Workers," *Monthly Labor Review*, June 1978, p. 7.

5. STUDENTS IN TWO-YEAR COLLEGES

An increasing number of vocational and occupational programs are being taught in two-year colleges. In the mid-1970s, about 55 percent of degrees awarded by two-year colleges were in occupational curricula.* The two-year colleges have been very successful in appealing to students over 25 and to students taking part-time programs. With these two population groups growing rapidly (Table 37), two-year colleges in the U.S. will provide an increasing share of vocational/occupational training in the future.

TABLE 37. ENROLLMENTS IN TWO-YEAR COLLEGES

(Students 25 and over)

	In Thousands	Percent of All College Enrollment
1977	2,144	18.1
1985	2,570	20.3
1995	2,679	22.3

Source: CPR, P-20, No. 333.

6. MINORITIES: NONWHITES

The proportion of minorities in the school population is rising sharply because of demographic trends and the longer-term pattern of minority enrollments catching up to white enrollment rates (Table 38). Historically, the

*Bureau of Labor Statistics, *"Occupational Projections and Training Data,"* Bulletin 2020, 1979, p. 15.

percent of minority students in postsecondary vocational educational programs has been slightly lower than the minority share of the total population. We expect that minority enrollments in all kinds of vocational programs--from basic skills for disadvantaged students through sophisticated programs at the two-year college level--will increase at a much faster rate than white enrollments.

TABLE 38. MINORITY ENROLLMENTS
(percent of all students)

	High School	College
1977	16.9	14.3
1985	19.1	16.1
1995	21.0	18.7

7. MINORITIES: HISPANICS

The Hispanic population in the U.S. shares many of the same socioeconomic characteristics as the nonwhite racial groups: overrepresentation in the lower income groups, underrepresentation among college students and executive positions, poor achievement results on standardized tests, etc. The Hispanic population, which numbers about one-half the other minority groups, tends to be much younger than the white population, their birth rates are high, and their immigration rates are high. Thus, this group, too, is likely to account for a large share of vocational education students in the future with all the implications for special educational needs that might stem from cultural and linguistic differences.

8. SECONDARY SCHOOL ENROLLMENTS

Around fifty percent of enrollments in all types of vocational education courses are in secondary school programs. Secondary schools will feel the full force of the aging of the baby-boom group during the 1980s (Table 39). Vocational courses in secondary schools are likely to experience a similar sharp falloff. However, in the 1990s, the large number of children that will be born to the now-mature women of the baby-boom group should push total secondary enrollment, and in turn vocational course enrollments, up again.

TABLE 39. SECONDARY SCHOOL ENROLLMENTS

	In Thousands	Percent Change
1977	16,152	
1985	13,992	-13.4
1990	12,608	- 9.9
1995	14,380	+14.1

9. ARMED FORCES

The armed forces have long played an important role in vocational and occupational training. As an all-volunteer force, they are making a strong recruiting drive based on their ability to provide useful training for a civilian career. In addition, they have set a long-term target for the armed forces of around two million. This means that the armed forces share of the total young adult population will begin to rise in the late 1980s (Table 40). Since the majority of recruits will be males with high school degrees, the impact on this subgroup will be substantial: approximately 19 percent of all males between the ages of 18 and 21 who have a high school degree and who are no longer in school will be in the armed forces by the early 1990s. The armed forces will thus be providing a major share of vocational training for that age group.

TABLE 40. ARMED FORCES ENROLLMENT FROM 18- TO 21-YEAR OLDS

	Numbers	Percent of Total Age Group
1977	713	4.2
1985	630	4.1
1995	623	4.7

10. QUALITY OF RECRUIT: THE HIGH SCHOOL DIPLOMA

High school completion rates have increased over the past decade. Because the vast majority of students enrolled in postsecondary vocational education tend to be high school graduates, increased attainment has helped the growth of vocational education. By 1995 the number of high school dropouts and high

school graduates not in school in the 18- to 21-year-old age group will fall off substantially (Table 41). While there will be fewer graduates in the younger age groups, educational attainment in the over-35 age group will increase dramatically throughout the 1977 to 1995 period. (Table 42). Post-secondary vocational education will have many opportunities to tap this expanding source of serious, mature students by offering innovative part-time programs.

TABLE 41. HIGH SCHOOL DROPOUTS AND COMPLETERS
(Aged 18-24)

	Dropouts		HS Graduates, Not in School	
	In Thousands	Percent Change	In Thousands	Percent Change
1977	4,435		15,205	
1985	4,183	- 5.7	15,028	- 1.2
1995	3,539	-15.4	12,171	-19.0

TABLE 42. HIGH SCHOOL GRADUATES (AGED 35 AND OVER)

	In Thousands	Percent Change
1977	50,811	
1985	61,643	+21.3
1995	76,693	+24.4

11. QUALITY OF RECRUIT: WHAT IS LEARNED

While a greater proportion of students are finishing high school, the amount the students are learning in elementary and high school seems to be declining. The only objective measure of this declining performance is achievement on standardized tests. While there have been many critiques of what such tests actually measure, it seems clear that there has been a marked deterioration in student achievement, especially on understanding written material. And this deterioration holds equally for students at all levels of performance. This deterioration is likely to level off in the 1980s. Nevertheless, past records indicate that the achievement levels of the average student in vocational education will probably be lower in the future.

12. EDUCATIONALLY DISADVANTAGED

As a higher portion of all young adults attend regular colleges, other postsecondary vocational education programs can be expected to draw increasing numbers from educationally disadvantaged groups. These groups include inner city youth, high school dropouts, and students whose primary language is not English. Currently, these students receive much of their vocational training in the armed forces, through special government programs like CETA and the Job Corps, and on the job. Because these groups are sure to account for a larger share of vocational education programs, remedial education programs are likely to play a more prominent role within the more traditional curricula.

POLICY IMPLICATIONS

The perspectives of vocational education planners vary as widely as the population groups their programs serve. For purposes of this report, we have defined four different constituencies for vocational education: secondary school students, postsecondary noncollegiate students, two-year college students, and other students (e.g., armed forces personnel, CETA enrollees, apprenticeship trainees). The environmental factors we have examined will affect these groups in different ways and many of the policy choices faced by planners will result from shifts in enrollment among groups rather than shifts to or away from vocational education per se. Thus, in reviewing the major policy implications, we have tried to reflect the differential impacts that environmental changes might have on each group.

The following nine points summarize the major policy implications for planners in vocational education.

1. HIGH TECHNOLOGY

The economic outlook calls for a substantial increase in investment in the 1980s and an increasing substitution of capital for labor. This could well be a boom period for new technologies: new computer applications, wide utilization of microprocessors, a transformation of office word-processing and communications, an expansion of health-care equipment, a whole new field of biotechnology, etc. This expansion of high technology will have the effect of upgrading many occupations and making higher skill demands in formerly routine jobs or creating new skilled positions. This implementation of new technologies will create a myriad of opportunities for vocational education programs at all levels if program directors are sensitive to the pace and scale of shifts in employment opportunities.

2. LOSS OF TRADITIONAL STUDENTS

Secondary school enrollments in vocational education programs are sure to fall within the next decade, even if vocational programs maintain their relative share of secondary school enrollments. Postsecondary enrollments of students between the ages of 18 and 24 are also likely to fall--particularly after 1985. This will have an especially large impact on the full-time student population of noncollegiate postsecondary schools.

3. RISE IN IMPORTANCE OF NEW GROUPS

While the number of the traditional young adult, full-time vocational education students will decline, there should be a sharp rise in new candidate populations. Most notable among these groups will be young adults who are 35 and older, especially women re-entering the labor force, women currently holding part-time jobs, and both men and women who are seeking to upgrade their skills and make mid-career changes. Of all the vocational/occupational education providers, the two-year colleges seem best suited to meet the needs of this group. The two-year colleges have successfully recruited from a wide variety of people in this age group, and word-of-mouth information about course options can spread quickly. In order to survive, more limited noncollegiate vocational education programs will have to develop a much more aggressive marketing network to identify potential students in these age groups and convince them of the benefits of their programs.

4. THE EDUCATIONALLY DISADVANTAGED

Educationally disadvantaged groups will comprise a larger percentage of vocational education enrollment, especially in publicly sponsored programs (e.g., two-year colleges, publicly supported postsecondary noncollegiate schools, armed forces, CETA). This implies a complementary program of remedial basic skills courses along with the regular vocational/occupational skills course. Certain programs must be set up to target specific groups--inner city youth, Spanish-speaking adults in rural counties, etc. And teachers and curricula should reflect the changing needs of the students. Still, with skilled labor in relatively short supply (and inadequately prepared youth still in abundance)

the societal returns of any effective vocational training of these disadvantaged youths should be very high.

5. THE QUALITY OF STUDENTS

If achievement levels of the average student entering vocational education continue to fall, this will have serious consequences for curricula, teaching methods, and program goals over the longer-term. However, since the decline in standardized test scores has been slight on a year-by-year basis, no dramatic changes can be expected. Further, if motivation has been a factor in the test score decline, it may be that the older adults who are coming back to school for training related to labor force re-entry or career changes will be far more positively motivated than younger students. Thus, the schools serving more mature students may find a much higher success rate in their programs.

6. CULTURAL DIFFERENCES

A larger share of minority students will participate at every level of vocational education. Each minority group--blacks, Asians, Hispanics--will bring their own cultural expectations and perspectives. Adjustments in faculties and administrative personnel will be needed to better reflect the relative proportions of the clientele being served.

7. FINANCIAL PROBLEMS

Public support for vocational education increased rapidly during the 1970s. The same will probably not be true during the 1980s. The growing spirit of fiscal conservatism spawned by the high inflation rates of the 1970s will probably mean that education budgets will not keep pace with overall growth rates of GNP. The expanding population base among older adults may make two-year colleges an exception among public programs. But the crimp on public budgets should provide a substantial opportunity for the expansion of private-sector programs.

CONCLUSION: THE OUTLOOK FOR VOCATIONAL EDUCATION

The numbers of students enrolled in federally aided vocational education should continue to grow during the 1980s but at slower pace than historically. Between 1966 and 1972, vocational education enrollments in federally aided programs grew at an annual rate of 11.5 percent; between 1973 and 1978 that rate fell to 6.3 percent. With the fall in the absolute number of young people and the growing competition from non-federally aided programs, enrollment should grow on the order of three to four percent during the 1980s.

Direct public support for vocational education will also diminish because of the growing mood of fiscal conservatism. Still, indirect support for vocational education (through private business, armed forces training, etc.) should remain strong.

Important shifts in clientele will occur. There will be more part-time students, adults over 35, women, minorities, and educationally disadvantaged.

Finally, the role of certain providers of vocational education will increase significantly. The clear winners in the competition for students appear to be the two-year colleges, in-house business training, joint business-vocational school training, and the armed forces.

PART III

AN ALTERNATE ECONOMIC SCENARIO

There is a lot of uncertainty about the future. In fact, the future may not look much like the description in Part I. This section is intended to look at an alternative economic scenario and examine how it might affect the trends in vocational education. This will permit some assessment of the sensitivity of plans to alternate possible outcomes. We have selected what we call a pessimistic economic scenario, that is, one in which the economy has many more problems than those outlined in the most likely forecast. This scenario has a reasonable degree of probability (15 percent) but is much less likely that that described in Part I (40 percent).

A PESSIMISTIC SCENARIO

High rates of inflation pervade the economy. Periodic bouts with double-digit inflation are a direct consequence of energy price hikes, escalating food and housing costs, and bottlenecks in the production of certain materials and in the availability of certain skills.

The inability to control inflation and periodic shortages of key materials and skills creates a pervasive climate of pessimism. Both investment and consumer spending increase at rates well under historical averages. Real GNP growth averages about one percent per year.

The combination of high inflation and low growth puts a real squeeze on middle-class standards of living. Many women who would prefer not to work end up in the labor force, and an increasing number of older people are forced to postpone retirement. This means that an additional 4 to 5 million people join the labor force by the mid-1980s, so that the growth rate of the labor force actually increases (Table 43). While businesses substitute plentiful labor for capital, all the extra job seekers are not able to find jobs. Unemployment rates average more than one percentage point higher than in the 1970s, coming to 7.2 percent on average in the mid-1980s (about 8.8 million people). Rates are especially high among the young and the poorly educated.

TABLE 43

LABOR FORCE GROWTH

	In Millions	Rate of Increase	
1975	96.4		
1980	108.0	1976-80	2.3
1985	122.1	1981-85	2.5

With economic problems prominent and unemployment high, government spending increases at a rapid pace. Rather than decreasing as a share of GNP, total government spending, especially transfer payments to the unemployed, increases.

IMPLICATIONS OF THE PESSIMISTIC SCENARIO FOR VOCATIONAL EDUCATION

This type of economic framework would cause some special problems for vocational education. Seven are of particular note:

- During the 1980s, education will be much more dependent on older, part-time students whose choices on education and training are much more discretionary than their younger counterparts. Thus, in bad economic times, the drop in enrollments among the older age group may be very sharp.
- The lower rates of capital investment by business will mean that new technologies will be much slower in their spread through society. This implies less need for upgrading of job skills, fewer new technical positions, and less of a need for specialized vocational training.
- The cost of specialized vocational education will escalate even faster in this inflationary environment; fewer of the young will be able to pay necessary costs and many of the postsecondary noncollegiate schools will find themselves in financial trouble.
- Young people with limited job prospects will be discouraged from pursuing vocational education courses.
- Business, in times of poor profits and plentiful labor supply, will be much less interested in expanding costly in-house retraining of employees or tuition-aid programs. Joint business-vocational education programs will not get very far under these economic conditions.
- Disadvantaged groups--especially those who are young--will have a very tough time in the job market. They will have little incentive to enroll in vocational education. Instead of accounting for an increasing share of the vocational education market, they may account for a decreasing share.

- The armed forces will have a much easier time recruiting its full quotas. In such a situation, the military's incentive to enhance vocational training might fall. Young people leaving the army may be less well prepared for jobs in the private sector.

While potential problems in the vocational program within this pessimistic scenario are easy to identify, opportunity areas still remain. At least four are noteworthy:

- Government job programs modeled on CETA or the Job Corps are likely to expand. A host of opportunities will be opened up directly in the public sector or will be government-financed to deal with those chronically unable to find jobs.
- With youth unemployment high, the armed forces may even find its recruiting quotas far surpassed. This will provide them a chance to be much more effective in the whole field of vocational education.
- Two-year colleges will remain a place of relatively cheap vocational training. They may attract many youths away from alternative training programs.
- In bad economic times, many students who would normally have gone to college for liberal arts education may switch to a more practical program such as vocational education.

The pessimistic economic scenario, in general, will create a worse climate for vocational education. There will be some clear losers among client groups and among institutions that provide the education. But even in this environment, there will be some special opportunities for particular institutions.

Some comparisons between the implications of the two scenarios are interesting. In both scenarios, vocational education will be more dependent on the over-35, part-time attendee population. However, this dependence creates a greater vulnerability because the choice of the older population group to attend a vocational training program is discretionary and is likely

to change in bad times. The government's role can vary from a smaller factor in the most likely scenario to a dominating factor in the pessimistic one. In both scenarios, two-year colleges and the armed forces are clear gainers. Because of the high cost of much of the specialized training involved in vocational education, it seems to be vulnerable to a generally inflationary environment. Finally, in both scenarios dominant factors seem to point to a slower growth rate in vocational education enrollments.

ADDENDUM: REACTION OF PARTICIPANTS

The participants who discussed this paper at the conference on "Alternative Futures for Vocational Education"* raised a number of issues that reflected their specific concerns. Some of these issues emphasized points in the paper; others raised new concerns. This addendum summarizes the issues raised, dividing them into four sections: productivity, the public sector and education, education for special groups, and educational policy.

PRODUCTIVITY

How much confidence could be placed in descriptions of future changes in productivity when it is so difficult to ascribe the relative contributions of labor and capital to past changes in productivity? For example, can the record of a declining rate of growth of productivity in the United States during the last 10 years be accounted for by a fall in R&D expenditures, a lag in capital investment, a larger number of inexperienced workers, the rapid growth of the service sector (where productivity increases are basically not measurable), or to other factors? There is no consensus on identifying and quantifying relative contributions in the past, which makes it all the more difficult to discuss "appropriate" policy choices for the future.

Even if appropriate policies for the future could be identified, can we anticipate that entrepreneurs will act rationally and respond to the incentives established? The record of business leadership in certain major industries (e.g., automobiles, steel, railroads) indicates that decisions

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*Held at the National Center for Research in Vocational Education on January 8-9, 1980.

are made in terms of defending an established position or market share rather than in terms of efficiently utilizing capital and labor.

Finally, participants worried about possible changes in the long-term availability of capital and labor. For example, domestic investment funds might not be so plentiful if opportunities for profitable investment abroad expanded rapidly and attracted a greater portion of available funds. Or, the labor force situation could change dramatically if legal and illegal immigration increased substantially. Despite the uncertainties surrounding the future size of productivity gains and the causal relationship between vocational education and productivity, no one disputed that the latter two were strongly linked and that future increases in productivity would place great demands on the technical skills of the working population.

* * * * *

Authors' note: The participants' comments effectively make the point that forces that will actually determine productivity over the next decade are much more complex than those outlined in "The Economy" section of this paper. An in-depth study of such forces goes beyond the scope of this project. What this paper tried to do was to emphasize a fundamental point: There is going to be a major decline in the availability of labor over the coming decade; thus, future increases in productivity will be much more dependent upon increases in capital investment, whether that investment be in capital equipment or in labor training. That point, we think, remains true.

THE PUBLIC SECTOR AND EDUCATION

The government will continue to play a critical role in determining funding levels of education. At the same time, the ability of the government to provide funding can change radically. A war or serious crisis in the Middle East could greatly expand the government's role in society: public

spending would rise, the draft would be reinstituted, and the allocation of scarce materials would be rationed. Yet the resources available for education may be reduced by pressure for expenditure in defense-related areas.

Also, any increase in government expenditure is likely to have consequences for the taxpayer. Increases in government revenues might entail a greater burden on the middle class because of the graduated income tax. But it is this very squeeze on the middle-income taxpayer which is producing the taxpayer's revolt. The success of the taxpayer's revolt and the consequent fall in resources available to the government for many categories of non-defense spending is obviously the most troublesome element involving the public sector.

The restrictions on financial resources come at a time when other expenditure burdens will be growing for state and local governments. Over the next decade, for example, the as yet unfunded obligations of the government retirement system will be taking larger shares of budgets. In addition, the infrastructure built up over the last 40 years (roads, transport systems, water and sewer lines, etc.) will need massive funds for refurbishing. Such drains on state and local budgets, along with the taxpayer revolt, may mean critical shortfalls in revenues for the education system as a whole.

One major option to maintain the flow of funds to education is to have the private sector pick up a greater share of the costs. This could mean business sponsoring course work undertaken by employees at educational institutions or businesses conducting more formal training of their own. Also, individuals may pay more in tuition and fees. But such a choice can have serious consequences: it turns more of the decisions as to the type of education and who gets it over to businesses, who usually have a vested interest in the benefits of that education. People who need education the most may not get it. The increase in business training could weaken public educational institutions. And all this would be done with an implicit government subsidy since training and educational expenses are all tax-deductible for businesses.

EDUCATION FOR SPECIAL GROUPS

The educational opportunities open to the older working woman--or at least her ability to take advantage of these opportunities--may be greatly exaggerated. There seem to be three main limitations: the vast majority of jobs that women traditionally hold are clerical and require little additional education; very often the working woman has household or child-care responsibilities that limit the time available for education; and the income earned is seldom discretionary and available for educational expenses. A possibility for dealing with some of these problems would be a major expansion in the availability of day-care facilities.

A group that will be increasing its social participation over the next decade is the handicapped. The combination of economic necessity and improvements in medical science and technology will allow increasing numbers of handicapped persons access to education and to jobs.

EDUCATIONAL POLICY

The most critical problem may be the adaptability of educational policy-makers. A lot of information is available on demographic, economic, and governmental changes and their consequences. But the people in effective control of budgets and curriculum have to be able to adapt to these changes. For example, how effective will state legislators be in starting preparations now for the needs of the late 1980s? Or how effective will administrators at postsecondary schools be in adapting a curriculum from its present orientation to 18- to 22-year-old full-time students to a new one focusing on over-30-year-olds in part-time programs?

Finally, the point was made that even the evident problems of the future--the smaller number of students, the need to adjust to new groups, etc.--create opportunities for vocational education. This was best summarized by the remark: "If you don't have to worry about expansion of the product, you can pay more attention to the quality."

APPENDIX C

The NIE Vocational Education Study

A Progress Report

The NIE Vocational Education Study--

A Progress Report

by

Henry David

Director, Vocational Education Study Project

The National Institute of Education

AVERA Research Section Meeting

AVA Annual Convention
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Anaheim, California

In reporting on the progress of the Congressionally-mandated study of vocational education which the National Institute of Education is conducting, I propose to touch also on some of the conditions which affect the carrying out of a policy inquiry in a Federal setting. Note the words "policy inquiry," for that is the most telling way to describe the Study, even though elements of what is conventionally thought of as program evaluation are embedded in it. Its primary focus is the purposes, structure, and substance of Federal vocational education and related policies and their consequences for a public school vocational education enterprise which is decentralized and highly diversified.

For those unfamiliar with the Study, the obvious starting point is Title V, Section 523(b) of the Education Amendments of 1976 (P.L. 94-482). This part of the Act charges the National Institute of Education with undertaking "a thorough evaluation and study of vocational education programs conducted under the Vocational Education Act of 1963, and other related programs conducted under the Comprehensive Employment and Training Act of 1973 and by the State Post-Secondary Commissions authorized by the Education Amendments of 1972." The 1976 Act mandating the Study also directs that it "shall include-

(A) a study of the distribution of vocational education funds in terms of services, occupations, target populations, enrollments, and educational and governmental levels and what such distribution should be in order to meet the greatest human resource needs for the next 10 years;

(B) an examination of how to achieve compliance with, and enforcement of, the provisions of applicable laws of the United States;

(C) an analysis of the means of assessing program quality and effectiveness; . . . and

(F) a review and evaluation of the effectiveness of programs funded under subpart 5 of part A of the Vocational Education Act of 1963 [which contains the Consumer and Homemaking Education provisions of the law] . . . ."

The legislation, moreover, states that "findings and recommendations" are to be part of the Study, "including recommendations for changes in" the pertinent legislation "or for new legislation . . . ."

In addition, the mandate granted the Institute a hunting license, so to speak, in authorizing it to seek to secure from the Commissioner of Education and the Secretary of Labor funds for conducting up to three "experimental programs" relevant to the three lines on inquiry into the distribution of funds, compliance, and the means for assessing vocational education programs. On this last item, I will have nothing to report by way of "progress," for no significant experimental programs that would also serve to produce empirical findings of value within the time-frame of the study could be invented. This hunting license, in short, did not serve to capture additional, external funds. As will be seen, additional support for the Study, above that provided by the Congress, has come from other sources.

Preparatory work on the Study was well under way by the spring of 1977. By early fall of that year, the bases had been established for developing a plan for the Study, which under the legislation was to be submitted to the Congress for review and approval by the close of 1977. These included (1) the appointment of a majority of the members of the professional staff;[1] (2) the establishment of a consultant group and of technical committees; (3) the creation of a Liaison Committee, consisting of representatives of nongovernmental organizations and associations in the field of vocational education; (4) site visits to vocational education institutions; and (5) the development

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1. There are currently seven professional members of the Vocational Education Study staff, in addition to the author. They are Gerry Hendrickson (Project Assistant Director), Allan Rosenbaum (Senior Associate), Stuart A. Rosenfeld (Senior Associate), Louise P. Corman (Associate), Robert C. Harris (Associate), Rodney W. Riffel (Associate), and Richard E. Carlson, (on detail from the Bureau of Occupational and Adult Education).

of a network of relationships with key individuals in Federal and State agencies and private voluntary associations willing to assist on the Study. The last continues to be of crucial importance to a Study which is, first, voluntary and, second, must be cognizant of and use reports on research and data collection conducted under other auspices.

One other step taken to assist with the shaping of the Study plan deserves special mention because of the subsequent misunderstandings to which it led. This was the commissioning of planning papers designed to elicit, first, a variety of viewpoints on vocational education policy, practices, problems, and lines of inquiry and, second, on Consumer and Homemaking Education (C&HE) programs. A selected number of these papers, all of which were completed in 1977, were published in two volumes by the U.S. Government Printing Office in April 1979, on the ground that they would be of interest and utility to the field. The volumes are The Planning Papers for the Vocational Education Study and The Planning Papers on Consumer and Homemaking Education Programs.

Quotations from several of the papers in the first volume, expressing negative judgments on the effectiveness, success, and functions of public school vocational education, have been represented in newspapers and elsewhere as results or findings of the NIE study. They are not. Both volumes explicitly state that the opinions expressed by the authors of the commissioned papers "do not necessarily reflect the position or policy" of the Study staff, the Institute, or the Department of Health, Education, and Welfare. There has been a report on only one of the extramural studies conducted under contract with NIE, as will be seen, and that does not deal with questions concerning the success or effectiveness of vocational education programs.

The legislation mandating the Study calls for a final report on the results

of the Study to the President and the Congress no later than September 30, 1981, and an interim report a year earlier. It is worth emphasizing that the law states that both reports "shall not be submitted to any review outside the Institute before their transmittal to the Congress . . . ."

A Plan for the Study of Vocational Education was submitted to the Congress on December 30, 1977, and work on its implementation and wide dissemination began as soon as it appeared to have secured the required approval. The strategy of inquiry delineated in the plan was shaped by a number of considerations. One was the compelling necessity to give primary emphasis to the four major substudy areas specified in the charge to the NIE: (1) Distribution of Vocational Education Funds, (2) Compliance with the Applicable Laws of the United States, (3) Means of Assessing Program Quality and Effectiveness, and (4) Review and Evaluation of Consumer and Homemaking Education (C&HE) Programs. Under each of these areas the Plan visualized the the conduct of a set of interrelated projects.

A second consideration was the recognition that other lines of inquiry would also have to be pursued if the Study was to be responsive not only to policy concerns and interests voiced on the Hill and elsewhere but also if the public school vocational education enterprise was to be properly placed within a larger setting. Thus, the Plan commits the Study, for example, to producing a "fact-book" on that enterprise that would serve to illuminate the Federal role in it and also to finding out what changes in its key features are attributable to the Education Amendments of 1976.

A third, and powerful, consideration shaping the research strategy appears in the constraints imposed by the resources of time, personnel, and money. The reporting dead-lines for the Study set by law called for the results of the

Study to be available for the reauthorization of the 1976 vocational education amendments. The Study was conceived, as the Plan states, so as to "contribute findings of fact, policy relevant analyses, judgments, and insights" useful in formulating future legislation. Results that missed the time target would have slight, if any, utility for legislative purposes, even if they were the products of superbly designed and conducted research. It was clear that miscalculations in the time requirements for any of the major substudies and projects would greviously penalize the Study as a whole.

The constraints on personnel, the product of the personnel ceilings operating in turn for the Department of Health, Education, and Welfare, the National Institute of Education, and the Vocational Education Study project, together with the required processes for recruiting and selecting staff, meant that the bulk of the inquiry would have to be conducted through extramural contract research. This, in turn, had significant implications for the design characteristics and timing requirements of each of the substudies and projects outlined in the Plan.[2] Could a larger professional and support staff have been appointed, and appointed expeditiously, it would have been possible to conduct more of the research intramurally. This would have led to reductions in dollar and time expenditures on research products and logistical activities, as well as in communication failures, which are endemic in research conducted through contract arrangements.

The financial resources provided for the Study also established constraints which strongly influenced, together with substantive considerations, decisions

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2. Subsequent problems and delays with personnel recruitment and appointment were linked to the reorganization of the National Institute of Education in 1978. It remains to be seen whether staff resources for the Study are adversly affected by the organization of the new Department of Education.

on research strategy. The financial resources were, for example, clearly insufficient to permit national surveys or experimental programs to be undertaken. This, in turn, helps explain the relatively heavy reliance placed in the Plan on case studies and the analyses of existing data and information sources. Similarly, subsequent decisions on proposed research contracts and on scopes of work in awards made were in some cases influenced far less by technical considerations than by resource constraints.

The Education Amendments of 1976 [Section 523(b)(3)] provide that up to $1,000,000 a year, for "each of the fiscal years ending prior to October 1, 1979," of the monies appropriated for Sections 102 and 103 of the Vocational Education Act be made available to the Institute for the conduct of the Study. The law also states that 10 percent of those funds are to be allocated to the studies of Consumer and Homemaking Education. Expenditures for internal salaries and expenditures, for extramural research, and for Institute indirect costs for housing the Study and providing support services are all met out of these monies. One consequence of the scale of funding has been a search for additional resources in the form of dollars or services. Modest success in the search has made possible the expansion of some dimensions of the Study. Contributions in the form of funds have been made by the Institute itself, the Bureau of Occupational and Adult Education (BOAE) of the U.S. Office of Education, the National Advisory Council on Vocational Education (NACVE), and the National Center for Research in Vocational Education (NCRVE). Other sources of support for additional research and the generation of new data are still being explored. Contributions to the Study in the form of services have been both numerous and varied ranging in form from the identification and provision of published materials to the conduct of a survey.

A fourth consideration shaping the strategy of inquiry were two assumptions.

One was to the effect that existing quantitative data banks and other information sources could, with full knowledge of their strengths and weaknesses, be more effectively exploited for policy inquiry than they had been hitherto. The second was that the other information-generating requirements of the Education Amendments of 1976 would produce documentary materials and data worth mining for the Study. Among the latter, of course, are the new Vocational Education Data System (VEDS), the State planning documents, the accountability reports, the State and Federal program evaluations, and the annual evaluative reports of the State advisory councils on vocational education (SACVEs).

A fifth consideration was the assumption that weaknesses or errors of judgment in particulars of the Plan could be subsequently corrected or compensated for without jeopardy to the basic strategy of inquiry. It was taken for granted that as work on the Study progressed the staff would develop a fuller appreciation of the problems of research design, the feasibility of individual projects, the need to pursue additional lines of inquiry, and of policy issues which could lead to departures from the original Plan. Examples of such departures are found in the modifications made in the scale and timing of projects and in the allocation of resources. Thus, the project to investigate the effects on learners of participating in vocational education programs was initiated earlier and with more resources than had been originally planned. Developments on the evaluation front dictated the postponement of a scheduled 1978 conference on evaluation to 1980. The research efforts on such issues as "special needs populations," CETA-Vocational Education coordination, and the legal framework for vocational education were substantially increased above their original scale. This has also occurred with the substudy on vocational education in rural and sparsely settled areas. Investigation also led to decisions to reduce the scale of resources initially allocated to projects. This was the case with the project designed to develop a prototype model for

simulating the effects of changes in vocational education funding, when it was learned that it could not be pursued effectively with the resources available. Examples of new projects not originally contemplated are inquiries into vocational education programs for the incarcerated and into the basic skills of vocational education students.

A sixth consideration influencing the conception of the Plan was the reasonable assumption that Federal educational and other legislation adopted both before and after 1976 would lead to research projects on topics germane to the central theme of the NIE Study, but conducted under other auspices, the results of which would be available in time to be drawn upon in preparing the Institute's final report. This meant that the concentration of effort in the NIE Study upon a relatively small number of policy and program issues would probably be redressed by the availability of research projects pursued elsewhere. The resulting continuing staff effort to identify and monitor promising related research projects indicates that the assumption was a safe one to have made.

The Study now stands at the end of the second year of implementing the Plan, which, as I have said, was transmitted to the Congress on December 30, 1977. I turn now to sketch salient aspects of the way in which it has been implemented. As will be seen, more than three-fifths of the resources for the Study are allocated to extramural research activities conducted through contracts with academic and nonacademic organizations. The remainder are used to meet intramural administrative and research costs. Six contracts, all awarded through the Request for Proposal process, are now in effect. The first of them was awarded in September 1978, about seven months after work on preparing the RFP began, and the most recent at the close of June 1979. The funding levels of these contracts, which vary in duration, range from a low of $121,000 to a high

of $762,000.

A seventh, small contract award in the amount of less than $44,000, was made in April 1979 through an add-on to a then existing Office of Education contract with CRC Education and Human Development, Inc. The contractor was charged with reporting on the ability of the States to respond to the evaluation requirements of the 1976 legislation, found in Section 112(b)(1), and the problems they were encountering in implementing them. This contract was designed to contribute to the task of analyzing "the means of assessing program quality and effectiveness" by establishing a base for determining changes in the capabilities of the States to carry out the evaluation provisions of the legislation that will have occurred by 1981. Work on the contract was completed in July 1979.

It is likely that no other significant contracts will be let for the Study unless additional funds are made available by other agencies. The six now in effect, each of which is more fully described below, are:

(1) Distribution of Federal, State, and Local Vocational Education Funds, awarded September 1978 to the University of California at Berkeley, School of Education, for a 36-month study, at a cost of $762,000, including some $70,000 transferred to the NIE from the Bureau of Occupational and Adult Education, U.S. Office of Education.

(2) State and Local Compliance and Evaluation Practices, awarded September 1978 to Abt Associates, Inc. Cambridge, Massachusetts, for a 36-month effort, combining the compliance and evaluation studies, at a cost of $611,000.

(3) Responsiveness of the Consumer and Homemaking Education System at the State and Local Levels, awarded September 1978 to CRC Education and Human Development, Inc., Belmont, Massachusetts, for a 21-month study, at a cost of $275,000.

(4) Meeting the Special Needs of Special Groups, awarded February 1979 A.L. Nellum and Associates, Inc., Washington, D.C., for a 21-month study, at a cost of $121,000.

(5) The Effects of Participating in Vocational Education Programs, awarded June 1979 to the Huron Institute, Cambridge, Massachusetts, for an 18-month study, at a cost of almost $130,000, including resources contributed by NACVE and NCRVE.

(6) Analysis of the Federal Legal and Regulatory Framework for Implementation of Vocational Education Legislation, awarded June 1979 to the Lawyers' Committee for Civil Rights under Law, Washington, D.C., for a 28-month study, at a cost of $217,000, including $70,000 contributed by the NIE.

Nine projects are being conducted intramurally by the Study staff, some with the assistance of consultants. They are on the following subjects: (1) the Effectiveness of Consumer and Homemaking Education Programs; (2) Vocational Education Programs for the Incarcerated; (3) Vocational Education in Sparsely Settled Areas; (4) Coordination of CETA and Vocational Education Programs; (5) Compliance in Selected Federal Grant-in-Aid Programs; (6) Basic Skills of Vocational Education Students; (7) Programs of the Post-Secondary Commissions; (8) Evaluation Issues and Practices in Vocational Education; and (9) Collaborative Arrangements Relating to Vocational Education for the Handicapped.

The extramural and intramural studies will provide, together with the results of the research and data collection efforts being conducted under other auspices, information, findings, and analyses, that will be drawn upon in developing the substance of the Institute's interim and final reports. The findings and recommendations of the Study, in short, will be the product of a effort devoted to the intergration and synthesis of a large number of separate studies and reports, some of which will be autonomous in the sense that they will not have been specifically designed to contribute to the NIE Study.

The separate NIE substudies, both extra- and intramural, while appearing to be freestanding, should, however, be viewed as being, in greater or smaller measure, by intention interrelated, complementary, or buttressing. Almost all of them will throw some light on the ways and extent to which the 1976 legis-

lation will have effected changes in the nation's public school vocational education enterprise. They will testify, so to speak, on the systemic consequences of Federal policy. Most of the studies, moreover, will throw light on the implementation of policy and on the relationship between policy goals and program instrumentalities. The theme of equity--that is to say, of equality of opportunity and access to vocational education programs for handicapped, disadvantaged, women, and still other categories of students--cuts across all the component parts of the Study. Obvious examples of interrelated character of the extramural studies appear in the fact that the Distribution of Funds investigation will provide information on issues of compliance as will the substudies on Special Needs and on the Analysis of the Federal Legal and Regulatory Framework. The Special Needs study should illuminate the manner in which vocational education and other funds are being deployed to benefit target populations. It should be apparent by now that, although there will be reports on the component parts of the NIE Study, the final report to the Congress and the President will not consist merely in a compilation of a set of substudies.

It has already been suggested that the design for the Study calls for coverage and analyses on a national scale through the use of existing data and information sources and for fresh data and information to be collected primarily through field work in selected localities. As will be seen, five States are common to four of the six extramural substudies in which field work is being conducted--that is, to all except the Legal Framework and Effects substudies. This should provide the basis for an understanding in depth of the vocational education system in California, Florida, Illinois, New York, and Texas. These states, referred to by the Study staff as the "core" states, were selected on the basis of geographic, population, educational, economic, and other criteria. Another six states are common to the Funds Distribution and Compliance and Evaluation Practices substudies--namely, Alabama, Colorado, New

Hampshire, North Carolina, Pennsylvania, and Oklahoma. Work will be conducted in a total of 29 states during the course of the Study.

The instruments for data collection and the conduct of field work have been prepared for all studies requiring them except one, the Special Needs study. The instrument for that field effort is scheduled to be completed in January 1980. Clearance by the Federal Education Data Acquisition Council (FEDAC) has been secured for their use for the substudies on State and Local Compliance and Evaluation Practices, the Responsiveness of the C&HE System at the State and Local Level, and for the pretest of the survey instrument for the Distribution of Funds substudy. Field work is currently under way on the first two, and the pretest of the survey instrument for the third has indicated the need of major revision. The work schedules call for most of the field work and data collection efforts to be completed by the Summer of 1980.

It will be seen from the description that follows of the principal features of the substudies being conducted extramurally that there are differences among them in purpose, methodology, complexity, and status of work.

The Distribution of Federal, State, and Local Vocational Education Funds substudy is headed by Charles E. Benson, Principal Investigator, and E. Gareth Hoachlander, Project Director, both at the School of Education of the University of California at Berkeley. It has three major components: (a) to examine and evaluate existing national data bases; (b) to analyze the funding policies and practices, both in their design and against their reported distributions of funds to LEAs, in 15 states; and (c) to examine the distribution and utilization of vocational education funds from Federal, State, and local sources in terms of services, occupations, enrollments, and target populations.

The first involves analyses of the three major vocational education data sets--Project Baseline, System 437 (recently renamed 406A), and OE/BOAE--in terms of stability over time and comparability. A report is scheduled to be made early in 1980. Preliminary findings indicate that the State data show great instability from year to year and that the hope of establishing reliable information that would enable one to show changes since 1976 may be frustrated.

The second task consists of analyses, first, of funding formulae as described in existing State documentary materials and, second, of the actual flow of funds to LEAs in 15 States. The first analysis is scheduled to be completed in February 1980 and the second by June 1980. The 15 states are Alabama, California, Colorado, Florida, Illinois, Minnesota, New Hampshire, New York, Oklahoma, Pennsylvania, South Carolina, South Dakota, Texas, Utah, and Washington.

The third component was designed to collect hitherto unavailable district and school level data essential for an adequate description of vocational education expenditures in relation, as has been said, to services, occupations, enrollments, target populations, and levels of education. Orginally, data were to be gathered through a survey of 1,600 secondary and postsecondary institutions in ten States. Unfortunately, as has been noted, it was found that the survey in its orginal form could not be used. Protests against still another survey instrument, given the burdens of responding to the requirements of VEDS and the school survey being conducted by the Office of Civil Rights, and the unavailability of some of the data elements desired compel changes to be made in the survey design and conduct. These, it is planned, will be made final in time for the modified collection effort to be under way in February and March of 1980. A report on this part of the substudy is scheduled to be submitted in January 1981 and a final report on the substudy as a whole is to be

made in April 1981.

The State and Local Compliance and Evaluation Practices substudy being conducted by Abt Associates, Inc., with Vernon Lee Beuke as Project Director and Carol Lukas as Deputy Project Director, inquires into State and local behavior in 15 States with respect to compliance with the spirit and letter of Federal legislation and its evaluation requirements. It, too, has several facets. It examines processes through which States and LEAs seek to comply with the Education Amendments of 1976. It seeks to determine the effects of Federal vocational education policy and practices upon State and local vocational education activity, particularly with respect to equality of access to vocational education by the disadvantaged, handicapped, women, and persons with limited English proficiency. It also seeks to learn about the ways in which State and local conditions affect the implementation of Federal vocational education policy and about the means of achieving compliance with Federal legislative mandates. A key purpose of the substudy is to examine the means for evaluating program quality and effectiveness and their consequences for program management and improvement. This requires appraisal of the criteria used in evaluations, including those specified in legislation, and of how the several Federal requirements for evaluation interact.

Field work at both State and local levels is to be conducted for this substudy in ten states: Alabama, California, Florida, Illinois, Indiana, New Hampshire, New Mexico, New York, Texas, and Wisconsin. In another five states--Colorado, Kentucky, Oklahoma, Oregon, and Pennsylvania--the field work will be conducted only at the State level. From interviews with a variety of respondents and other materials, case studies of the 15 states will be developed and presented in a final report due in December 1980. Included in that report will be analyses of the State Plans, accountability reports, and SACVE reports of all states.

Field work began with the short "ambassadorial visits" to each of the 15 States during the summer of 1979, in order to familiarize State officials with the nature of the project and to initiate the process of data collection. Field work is now under way and is scheduled to be completed by March of 1980.

The substudy on the Responsiveness of the Consumer and Homemaking Education System at State and Local Levels is being conducted by CRC Education and Human Development, Inc. with Frances Jones as Principal Investigator and Judith Siegel as Project Director. Its purpose is to examine the responsiveness of the Consumer and Homemaking Education system of programs, activities, and services (Federal, State, and local) to the intent of Subpart 5, Section 150, of P.L. 94-482. It seeks to determine whether those responsible at Federal, State, and local levels for implementing C&HE are realizing the objectives of the law with respect to the categories of people who are to be served, the relationship of the instructional programs offered to national, regional, and local needs, as specified in the legislation, and the consequences that the legislation may have for C&HE programs which are not directly federally funded. A final report on the substudy is scheduled to be submitted by May 1981.

The research plan calls for the collection of information on vocationally approved C&HE programs in ten states between November 1979 and May 1980. These states include the five "core" states and Georgia, Idaho, Maine, Nebraska, and West Virginia. The local sites in which field work will be conducted in these states have for the most part already been selected and will provide information on approximately 100 schools and institutions. A pilot study conducted in 1978 in two states, Connecticut and Vermont, helped in developing and testing methods for collecting data.

A preliminary profile of C&HE program in each State, emphasizing expendi-

ture and enrollment information, is being prepared on the basis of quantitative data obtained from Federal agencies and State documents.

Qualitative data will be collected through interviews with State and local administrative personnel during site visits. The interview guides that have been developed are designed to elicit information on three principal questions: (1) what are the uses, roles, and consequences of Federal funds for the C&HE system? (2) what are the roles of Federal, State, and local factors in promoting the attainment of purposes set forth in the Act? and (3) to what extent are C&HE programs serving populations and offering program content consistent with the Federal legislation?

The substudy on Meeting the Special Needs of Special Groups, being conducted by A.L. Nellum and Associates under the direction of Martin Blank, seeks to assess how and to what extent the needs for vocational education on the part of special groups identified in Federal legislation are being met. While it will draw heavily, as has been observed, upon the findings of other substudies, it will also produce additional primary information through field studies in three communities in each of the five "core" States--California, Florida, Illinois, New York, and Texas. The 15 communities now being selected will be characterized, among other attributes, by relatively low family income levels, high youth unemployment, and concentrations of minority populations. The foci of primary interest are the objectives, strategies, and resources at work in each of these communities to meet the needs of special needs groups. These consist of populations identified by specific set-asides in the legislation, such as handicapped persons, the disadvantaged, persons with limited English proficiency, and Indians, and by other provisions dealing with equality of opportunity objectives, including those providing for bilingual programs and sex equity.

To secure a fuller understanding of technical issues associated with the problems of special needs groups, their needs, and Federal policy issues, the contractors and the Study staff, jointly convened a series of small study group meetings on each of the special needs populations during the summer of 1979. These were attended by representatives from public interest and advocacy groups and Federal agencies. The final report on the substudy is due in November 1980.

The substudy on The Effects of Participating in Vocational Education Programs is being conducted by the Huron Institute, with Walt Haney and Elinor Woods as Co-Directors. The design for this study was shaped in part by a conference on that subject held in June 1978. The study has two parts, both of which attempt to determine both shorter- and longer-term economic and noneconomic effects on learners, that may be attributed to participating in secondary and post-secondary vocational education programs. Economic effects include employment and unemployment experience, wage rates, earnings, and occupational mobility. Noneconomic consequences include further education, job satisfaction, and the acquisition of work related values.

One part examines those studies reported since 1968 which did not use either national longitudinal surveys or short-term job placement data to assess the effects on learners of vocational education programs. Such studies--which may center on State or LEA programs, on institutions, or particular occupational programs--that seek to determine economic, educational, and social outcomes are being examined under a subcontract with the Huron Institute by the National Center for Research in Vocational Education at Ohio State University. A literature search has identified about 600 studies for appraisal in the light of methodological soundness and other criteria for inclusion. How many studies will finally be found to contain firm and reliable information on the effects on learners remains to be seen.

The second and larger part of the substudy focuses on existing research on effects based on national longitudinal survey data and on the reanalyses of such data. Distinguishing among vocational education learners and also between them and nonvocational education learners are key probelms, if the effects attributable to participating in vocational education are to be reliably determined. This part of the substudy, therefore, undertakes a careful examination of the major longitudinal surveys (e.g., National Longitudinal Surveys of Labor Market Experience, Project Talent, National Longitudinal Study of the High School Class of 1972, and Youth in Transition) to see if and how vocational education students can be identified with reasonable confidence. In addition, consideration will be given to the possibility of creating a synthetic cohort of vocational education students from multiple files.

Common to both parts is the development of a set of propositions concerning the assertions that have been made about the effects of vocational education that emerge from a study of the legislative history of Federal policy. A report which will seek to synthesize the findings of both parts of the substudy is scheduled to be completed in January 1981.

The Analysis of Federal Legal and Regulatory Framework for Implmentation of Vocational Education Legislation is the most recent contract awarded for the conduct of a substudy. The work is being performed by the Lawyers' Committee for Civil Rights under Law, with Robert Silverstein and David Long chiefly responsible for directing the research and Craig McLaurin the Project Monitor. Final reports are scheduled to be submitted in May and June 1981. The substudy seeks to analyze the legal and regulatory framework for Federal vocational education policy and the capacity of the Federal government to implement that policy. One major component of the framework is Public Law 94-482 and the consequent regulations subsequently issued. Other components include the relevant provisions of Civil Rights legislation (in particular, Title VI of the

Civil Rights Act of 1964), Title IX of the Education Amendments of 1962, Section 504 of the Rehabilitation Act of 1973, the General Education Provisions Act, and the Comprehensive Employment and Training Act of 1973, as amended, and selected aspects of education legislation adopted in 1978 and 1979.

The substudy has two major parts. The first involves (1) an assessment for consistency, clarity, and comprehensiveness of the Vocational Education Act as amended (and the relevant regulations); (2) an inquiry into the degree of congruence between Federal and State interpretations of relevant laws and regulations; and (3) an examination of the incentives and sanctions in the Federal legislation. Emphasis is given to legislative provisions and regulations dealing with the allocation of funds, equality of access to vocational education for all students, State and local planning and evaluation activities, and the organization and administration of State and local vocational education programs. Field work in four States--California, Indiana, North Carolina, and Pennsylvania--will be conducted in this part of the substudy.

The second part centers on the Federal capacity for implementing vocational education policy. Attention is paid to the manner in which various Federal agencies involved--BOAE, DHEW's Office of Civil Rights, DHEW's Audit Agency, and the Office of Planning, Budget and Evaluation within the Office of Education --relate to the states and to each other. How and with what degree of clarity they communicate with one another and the modes and effectiveness of coordination among them are additional questions to which answers are sought.

This progress report on the NIE Study might be held to be deficient if it failed to indicate, however briefly, the attention being given by the staff to certain developments that lie ahead. On the research front there is, first, a decision to be made on the means for conducting three future oriented inquiries:

one is "projecting the greatest human resource needs for the next ten years," a second is projecting the skills, knowledge, and abilities likely to be needed by consumers and homemakers in the future; and a third is the conditions, circumstances, and climate relevant to the substance and structure of Federal vocational education policy and programs a decade or more in the future. The second item on the research front is the prospect of securing support for conducting two additional efforts. One would be a large-scale survey of CETA-vocational education coordination, and the second a national survey, using the Current Population Survey sample of 80,000 households (and, therefore, covering all age groups), to determine participation in all forms of vocational education and training programs. The third is the planning phase of work on a "fact-book" on the vocational education enterprise.

On what may be loosely described as the policy front, the following developments, with greater or lesser implications for the Study's conduct and conclusions, will also claim staff attention. First, there are the changes virtually certain to occur in CETA legislation in 1980, with the high likelihood of concurrent changes that year or the next in educational legislation, focussed on problems of youth unemployment. Associated with this is the probability of amendments to existing vocational education legislation. Second is the recent decision to hold hearings on vocational education legislation, perhaps as early as May 1980. Third are the effects flowing from recent and current efforts of BOAE to clarify policy and to change implementation procedures. Fourth are the longer-run consequences for Federal vocational education policy of the creation and administration of the new Department of Education.

Those who have not read the Department of Education Organization Act with care may be surprised to learn that Section 214, which establishes a Federal Interagency Committee on Education, also directs that Committee to "conduct a study concerning the progress, effectiveness, and accomplishments of Federal

vocational education and training programs, and the need for improved coordination between all federally funded vocational education and training programs." That report is to be submitted "to the Secretary and the Congress within the two years of the date of enactment of . . . [the] Act"--that is to say, by September 1981.

That, it strikes me, brings one back full circle to the mandate given to the NIE by the 1976 legislation and suggests a natural place to write "full stop."

APPENDIX D

AVA Recommendations

For Discussion Only

RECOMMENDATIONS

AMERICAN VOCATIONAL ASSOCIATION
LEGISLATIVE STUDY TEAMS

For the past year Study Teams of the American Vocational Association have been examining policy alternatives to develop recommendations which the Association will attempt to have incorporated in the vocational education amendments of 1981.

At the 1979 convention, the recommendations of these Study Teams were presented to members of the AVA for their comments and reactions. These reactions were solicited at a series of nine sessions held on December 1, 1979. The attached nine sets of recommendations were for discussion purposes only and do not represent the official policy or position of the American Vocational Association.

For Discussion Only

AVA Theme Session - LEGISLATION
Saturday December 1, 1979 Chairperson Melvin L. Barlow
Hosts: LaVera Morrett, Susan Willis
TOPIC I Basis for Federal Investment in Vocational Education

Presenter: Gordon I Swanson

Please respond to the following survey regarding information presented by the Basis for Federal Investment in Vocational Education Legislative Study Team. If you disagree with an issue/recommendation please comment as to why. Responses should refer only to this team's presentation, and answers must be completed by the close of the team's allocated time. Please submit your completed survey to one of the Hosts.

Issue #1: Should the purpose of the federal vocational legislation be to "assist" states as in current legislation or should it be to "cooperate" with states?
Recommendation #1: The purpose should be to cooperate. Accompanied by a genuine spirit of cooperation, such as change in language could initiate important reforms in vocational education.

Issue #2: Should federal law encourage states to accept their constitutional responsibilities to vocational education through state legislative authorizations and appropriations?
Recommendation #2: Federal law should encourage state legislative action for accepting state level consitutional obligations including the necessary cooperating functions which involve the federal level.

Issue #3: Should federal action include strong support for functions which state and local jurisdictions lack capability or ignored, delayed or carried out unwillingly?
Recommendation #3: The federal role should include support of such functions and include research, leadership development and the strengthening of quality. Such responsibility should not be organized solely to administer internal stimuli described as "program improvement"; it should be organized to include external stimuli for initiating program reforms.

Issue #4: In using the basic human resource generating institutions (school, families, communities, etc.) for implementing federal education and training priorities, should federal requirements enhance, erode or ignore the effects on such institutions?
Recommendation #4: Federally legislated requirements should enhance, or at least not diminish, the capacity of such institutions.

TOPIC I Basis for Federal Investment in Vocational Education, continued

Issue #5: Should the federal government (or the federal and state governments working coopertively) guarantee every citizen the right to an opportunity to prepare for, and advance in, the work force?
Recommendation #5: In an industrial democracy, such a right is as important as the right to vote. It should be legislated.

Issue #6: Should federally appropriated funds for vocational education be returned to states and local jurisdictions as a reward for failure (unemployment, high incidence of disadvantage, etc.) or as a reward for success (low drop-out rates, good performance, etc.)?
Recommendation #6: The basis for redistributing federal levies to state and local jurisdictions should include measures of success as well as measures of failure.

Issue #7: Should federal legislation deal with education methodology?
Recommendation #7: Federal action may stimulate vitality and diversity in educational methodology but it should conspicuously avoid prescribing it--whether by definition, authorization or fund allocation.

Issue #8: What should be the role of definitions in federal law?
Recommendation #8: Definitions in federal law should not:
(a) override the intent of state law,
(b) limit or constrain the boundaries of educational operations at state or local levels, or
(c) establish rigidities which are inimical to acceptable educational practice.

TOPIC II Basic State Grant Programs

Presenters: Eugene Lehrmann and Orville Nelson

Issue #1: Should federal vocational education funds be allocated only for target populations and national priorities?
Recommendation #1: Vocational education legislation should provide federal funds which could be used in a variety of ways to develop and support quality vocational education programs.

Issue #2: Should access to vocational education programs be expanded?
Recommendation #2: Vocational education should be expanded to provide better access for handicapped, disadvantaged, women, minorities and adults.

TOPIC II Basic State Grant Programs, continued

Issue #3: Should vocational legislation include special services that assist handicapped and disadvantaged students to successfully complete their vocational programs?
Recommendation #3: These services need to be provided through vocational education legislation. Also, the services provided by other agencies and programs need to be available to vocational education students and coordinated with those available through the legislation.

Issue #4: Should federal funds be available to maintain vocational programs?
Recommendation #4: Vocational legislation should provide funds to keep vocational programs current with the skill, knowledge and attitude content of jobs.

Issue #5: Should the legislation continue to support professional and curriculum development, research and leadership activities?
Recommendation #5: Support should be continued and there should be more flexibility in using funds for these activities.

Issue #6: Should more funds be provided for postsecondary and adult education?
Recommendation #6: The present 15 percent set-aside should be maintained for the current level of funding. This set-aside should be increased to 40 percent for additional funds allocated to vocational education.

Issue #7: Is it necessary for the legislation to provide resources for developing new programs?
Recommendation #7: Vocational education legislation should provide funds for developing new programs.

Issue #8: In previous legislation, some methods have been included. Should this be continued?
Recommendation #8: Methods should not be included in the legislation.

Issue #9: Present legislation treats states alike, even though they have differing needs. Should this be continued?
Recommendation #9: States and local districts/communities should receive funds based upon their level of need.

Issue #10: What mechanism should be used to fund programs and services for target populations?
Recommendation #10: Set-asides should be used to fund these activities. The present percentage of set-asides is maximum for the funds currently appropriated for vocational education.

TOPIC III Special Populations

Presenter: Leonard D. Kingsley

Issue #1: Federal vocational education legislation for special population groups.
Recommendation #1: Special population emphasis must be included in the legislation. Consideration should be given to innovative approaches of serving each group.

Issue #2: Cooperation among service providing agencies at the federal, state, and local levels.
Recommendation #2: Vocational education legislation must include provisions for collaborating with other agencies toward servicing commonly identified special population groups. A common definition of special populations should be developed that is consistent with definitions in related pieces of legislation. The definition should include the provisions of the vocational education definition so that services can be provided to students with educational and physical disadvantages as well as with economic.

Issue #3: Identified supportive and/or supplemental services must be provided for in vocational education legislation for special populations.
Recommendation #3: Vocational legislation must include definitive supportive and/or supplemental services for special populations groups that will ensure effective vocational training and employment. These services shall include but should not be limited to work assessment, counseling, health, economic support, child care, and academic resource assistance. Legislation should include the possibility of providing Human Resource Centers which can bring together and coordinate service.

Issue #4: Matching requirements of vocational funds need greater flexibility and liberalization which will permit overall matching of vocational education expenditures.
Recommendation #4: Provide for flexibility and liberalization of funds that permits overall matching of vocational education expenditures and permits special needs thrusts within the legislation. Credits state and local funds expended for vocational education for special populations as matching for federal funds expended toward supplementary or supportive services for such population.

Issue #5: Implementers of programs of special population groups should have pre-service and in-service education.
Recommendation #5: Legislation should provide for improved and expanded inservice and preservice training for administrators and instructors who are delivering vocational education to the special population groups.

TOPIC III Special Populations, continued

Issue #6: A service-based approach should be considered in meeting the needs of special populations.
Recommendation #6: Vocational education legislation should investigate options for identifying special populations such as a service-based approach as well as the traditional categorical "label" approach.

Issue #7: Programs of intervention should be considered for the earlier school years.
Recommendation #7: Vocational education legislation must include provisions for intercepting and correcting problems unique to special population persons during the junior high or high school years (no later than 14 years of age).

Issue #8: Coordination and provision of services related to equity at the state and local level.
Recommendation #8: Vocational education must include provisions for overcoming stereotyped and disproportionate representation of special groups through programmatic change. Expanded technical assistance should be provided through personnel training.

Issue #9: Equity compliance must be ensured in new vocational legislation.
Recommendation #9: Resources must be identified in new legislation which will provide the adequate structure for compliance activities. Because the effectiveness of vocational education efforts are hindered by the attitudes of other groups, coordination with related pieces of legislation must be developed.

Issue #10: Individual employment plan.
Recommendation #10: Possibilities should be provided for an individualized employment plan for students who need supplemental services. The plan can serve as a vehicle for coordinating in-school services as well as services from out-of-school agencies.

TOPIC IV Programs for Youth and Adults

Presenter: Lee Olson

Issue #1: Should vocational programs be developed specifically to serve unemployed youth?
Recommendation #1: Vocational education shall provide open-entrance, open-exit programs for unemployed youth which provide job competencies and basic survival skills needed to obtain employment, develop job stability, and enhance job advancement.

Issue #2: Should vocational programs which focus on the unemployed adult be initiated?
Recommendation #2: Vocational education shall provide readily accessible programs in depressed rural and urban communities that assist unemployed adults enter and advance in occupations that are self-fulfilling, essential to the economy and financially rewarding.

Issue #3: Should vocational education address the problems of sex bias and sex role stereotyping in education and employment?
Recommendation #3: Vocational education shall design and promote all programs in a way that educational and employment opportunities are equally available to both females and males.

Issue #4: Should vocational education address the energy problem?
Recommendation #4: Vocational education shall promote increased energy efficiency and conservation in production, distribution, and consumption through existing programs and design programs which will meet the business and industrial need for energy technicians.

Issue #5: Should the development of basic education skills be a responsibility of vocational education?
Recommendation #5: Vocational education shall provide basic education, including but not limited to mathematics, written and oral communications, and reading, as an integral part of each program.

Issue #6: Should vocational education students be provided with entrepreneurial and managerial skills?
Recommendation #6: Vocational education shall provide entrepreneurship experiences as an integral part of existing programs by establishing youth enterprises, providing paid and supervised employment and identifying follow-through services which promote business ownership.

TOPIC IV Programs for Youth and Adults, continued

Issue #7: Should vocational education involve itself to a greater degree in collaborative efforts with business, industry, and government?
Recommendation #7: Vocational education shall collaborate with business, industry, and government to provide job retraining and upgrading in short-term and long-range programs for new and expanding business and industry.

Issue #8: Should vocational education provide greater focus on support services?
Recommendation #8: Vocational education shall design a system of assessment, orientation, exploration, and follow-through which will provide some assurance that students can enter and succeed in occupations that are self-fulfilling, essential to the economy, and financially rewarding.

Issue #9: Should vocational education expend greater effort to serve new client groups?
Recommendation #9: Vocational education shall maximize the educational and employment opportunities of each individual by providing outreach services, support services, readily accessible institutional and community-based training, and follow-through services to new client groups.

Issue #10: Should vocational education provide continuing education services to employed persons?
Recommendation #10: Vocational education shall identify and provide advance continuing education opportunities for employees to improve productivity, enhance upward mobility, adapt to technological changes, develop entrepreneurial and managerial skills, and prepare for new occupations.

TOPIC V Programs of State and National Improvement

Presenter: Ronald D. McCage

Issue #1: Should social issues of enduring prominence be explicitly stated in the program improvement section of the legislation?
Recommendation #1: Yes. Provisions should also be made for these priorities to be revised to respond to new and emerging issues. Incremental phase-in funding should be considered.

TOPIC V Programs of State and National Improvement, continued

Issue #2: Role of federal, national, and state elements in program improvement.
Recommendation #2a: The federal role should include administrative monitoring, articulation, and policy development.
Recommendation #2b: The national elements should minimally include a National Center for Research, a liaison with State RCU's and the vocational education personnel development program.
Recommendation #2c: The state level must include a systematic continuum of activities including R & D, curriculum development, demonstration and innovation, personnel development, dissemination and utilization, and evalution.

Issue #3: Method of support at the state level.
Recommendation #3: A 30 percent allocation should be sought for program improvement activities plus $200,000 minimum set aside for each state. Maintenance activities (such as data collection systems) should not be funded through program improvement.

Issue #4: Funding arrangements for program improvement.
Recommendation #4: Provisions should be made that would allow the funding of program improvement efforts through contracts, grants, and/or cooperative agreements.

Issue #5: The elements included under State Program Improvement.
Recommendation #5a: Delete those aspects of guidance and counseling which do not pertain to program improvement and reassign them to a more appropriate section of the law.
Recommendation #5b: Sex equity should be maintained as an emphasis throughout the law, should be included as a priority in the state program improvement provision, but should be deleted as a specific section under program improvement.

Issue #6: Inclusion of national level programs under a single title or multiple titles.
Recommendation #6: All programs of national consequence should be included under a single title "Programs of National Consequence."

Issue #7: Funding for National Program Development.
Recommendation #7: Funding should be set as a 10 percent set-aside or a minimum of $60 million/yr.

Issue #8: Adequacy of the 5 year impact requirement.
Recommendation #8: Specify the impact statement in clear and measurable terms and eliminate the requirement from research and inquiry activities.

TOPIC V Programs of State and National Improvement, continued

Issue #9: Local, State, and National roles in Personnel Development.
Recommendation #9a: Continue leadership development through the vocational personnel education development program, the national academy, and the advanced study center.
Recommendation #9b: Inservice should be continued at the local level as a function of the state office directly or via in-service contracts/grants to higher education institutions and LEA's.
Recommendation #9c: Inservice should be encouraged as a collaborative state/regional/national effort via new and existing diffusion networks.

Issue #10: Should the Program Improvement provisions of vocational education be coordinated with other major federal laws?
Recommendation #10: Yes. ESEA, Higher Education, teacher education, career education, special education, rehabilitation, etc.

TOPIC VI Planning and Evaluation

Presenter: Charles Hopkins

Issue #1: Programs for new and emerging occupations in vocational education.
Recommendation #1: Priority should be extended to (1) new occupational training needs in existing programs to incorporate new technology in the occupations and (2) new and emerging training needs to respond to changes resulting from new technology, innovations, economic conditions, or national emergency.

Issue #2: Utilizing advisory committees in planning and evaluating.
Recommendation #2: The advisory committee section of the legislation should be expanded to include an advisory committee for each occupational program area and one for each recipient. Duties should be expanded to include an evaluation component.

Issue #3: Structure and use of the state plan committee.
Recommendation #3: The state plan committee should stand as it exists in current legislation. The state plan appeal process should be examined to insure that state plan approval and fund flow is not subject to vested interest.

TOPIC VI Planning and Evaluation, continued

Issue #4: Outcomes that vocational education should be evaluating.
Recommendation #4: Be more specific in legislation about quality and impact indicators. Evaluation outcomes should be defined and measurement criteria expanded and specified. Areas for measurement are: economic and industrial development, productivity, special populations, manpower need, general population, work ethic, etc.

Issue #5: Impact of flow-through funding on planning and evaluating vocational education.
Recommendation #5: Flow-through funding should not be written into the new legislation. This would not allow for continuity of planning nor would it allow for any meaningful evaluation or accountability. It would be in total conflict with the sole state agency concept.

Issue #6: Data needs for formulation of national policy and decisions.
Recommendation #6: Data should be collected and reported that will indicate that vocational training is contributing to national priorities and concerns. Certain data elements should be gathered on a sample basis and designated as a part of the National Center for Research mandated studies. Continuity and feasibility should be considered in data requirements. Minute detailed data from the local level should be reduced and/or deleted.

Issue #7: Flexible funding to recipients depending on the need exemplified in the planning process.
Recommendation #7: The basis for funding should be based on priorities related to ability of the local applicant to provide the resources to meet its identified need. Examples of factors to be considered are: financial base, special populations to be served; i.e., disadvantaged, handicapped, displaced homemaker, unemployed, welfare recipients, nontraditional trainees, displaced workers, etc., programs required to meet manpower needs and the cost of establishing programs.

Issue #8: Planning for more advanced technical training programs.
Recommendation #8: The planning and evaluation language in the new legislation should contain provisions about articulation between levels and institution and insure that curriculum provides more than just entry-level opportunities. Priority should be given to upgrading persons for business, industry and governmental services where there has been a change in technology.

TOPIC VI Planning and Evaluation, continued

Issue #9: Planning, evaluation and information needs for a new structured law with sections on purpose, administration, basic grants, program improvement, youth, adults, special populations, consumer and home-making and programs of national significance.
Recommendation #9: Planning, evaluation and information should incorporate into the language elements that address each of the sections contained in the new legislation. Particular priority should be given to the out-of-school youth served in a non-institutional setting.

Issue #10: Planning and evaluating linkages.
Recommendation #10: Activities reflected in the state plan should be based on the same elements that evaluation is to use to measure the outcomes. Language in the legislation should reflect the desired linkages.

TOPIC VII Financing Vocational Education

Presenter: Alan Woodruff

Topic 1. Distribution of Federal Vocational Education Funds to States

Issues

Issue #1a: The formula used in computing state allotments of federal funds is based on factors which do not inherently reflect the relative needs of states for federal assistance.
Issue #1b: The present procedure used to allot federal funds to states and commit funds to programs for target populations--through the "Set-Aside" provisions of the Act--does not reflect the distributions of the target populations among states.
Issue #1c: The present procedure for alloting federal funds to states does not provide for interlinking the funding requirements of programs designed to address interstate/regional needs and/or short term emergency conditions such as those associated with closing or relocating of a major industry.
Issue #1d: The present provisions under which Federal funds are alloted to states contains no specific incentive for extra effort on the part of states and local agencies.

Recommendations

Recommendation #1a: The formula used to compute state allotments of federal funds should be revised to include, as a basis for funds allotment, factors which reflect the relative need of states for federal aid to insure high quality programs of vocational education.

TOPIC VII Financing Vocational Education, continued
Topic 1. Distribution of Federal Vocational Education Funds to States

Recommendations, continued

Recommendation #1b: "Targetted" funds should be authorized and appropriated apart from the Basic Grant funds and should be allotted to states using a formula which reflects the relative distribution of target populations and the relative cost of serving these populations.

Recommendation: Federal funds should be authorized for distribution under grant programs which respond to different aspects of need. Examples might include:

(1) A Basic State Grant to be allotted to states by entitlement formula for the support of all basic program services--including services for target populations.

(2) A Regional Grant to be allotted to a "consortia" of states based on supplemental project applications to meet regional needs which transcend state boundaries.

(3) A Special Projects Grant to be allotted to states based on supplemental grant applications to provide supplemental services in response to special need conditions.

(4) A Supplemental State Grant to provide funds to be alloted to states making excessive efforts relative to their respective needs and fiscal ability.

Topic 2. Distribution and Use of Federal Funds Within States

Issues

Issue #2a: The required procedures for distributing federal funds from the State Agency to recipient agencies do not reflect relative needs which exist after state funds distributions have been made.

Issue #2b: The principal factors which the Act requires state agencies to apply to allotting funds to recipient agencies have limited significance in states where vocational education is fully state funded or where state aid programs contain district equalization provisions.

TOPIC VII Financing Vocational Education, continued.

Topic 2., continued

Issue #2c: The required procedures for distributing federal funds to recipient agencies do not insure that recipient agencies will recieve sufficient funds to make up the difference between project cost and available state/local resources and thereby insure project success.
Issue #2d: The required procedures for distributing federal funds to recipient agencies based on need do not provide for the distribution of funds based on probable benefits to be achieved.
Issue #2e: The targeting of federal funds through the "Set-Asides" and other provisions does not provide adequate flexibility for states to most effective use federal funds to supplement state funds in the areas of greatest need and may, where state funds are appropriated specifically to serve the target populations, promote inefficiency in the total vocational education finance program of a state.

Recommendations

Recommendation #2a: States should have maximum latitude to use federal funds in ways which most effectively complement state and local funding sources in meeting the objectives of the vocational education program.

Recommendation: Federal funds should be used to fund discrete projects which make a demonstrable contribution to maintaining program currency, improving program quality, and/or expanding program services and capacity.

Recommendation: Federal funds should be distributed to recipient agencies on the basis of the potential impact of individual projects. Local demographic and socioeconomic factors should not dominate in the distribution of federal funds.

Recommendation: Provisions intended to target funds on services for special populations should establish funding requirements based on measures of need or as a function of the federal funding level. Legislation should not, however, restrict the use of federal funds for these purposes. Federal funds should be useable for other purposes if the intended levels of service and program funding can be achieved using state/local resources alone.

TOPIC VIII Administration of Vocational Education

Presenter: William B. Richardson

Issue #1: How should the federal government be involved in the Administration of Vocational Education?
Recommendation #1a: The Federal government should determine a set of federal priorities which may impact the general welfare of the nation.
Recommendation #1b: The Federal government should make available financial resources to the states to aid in the implementation of the priorities including minimum levels of programatic involvement.
Recommendation #1c: The Federal government should aid the states in developing a state plan or contact which addresses the federal priorities.
Recommendation #1d: The Federal government should allow the states option to reallocate assigned funding levels from one priority to another when performance within a given priority exceeds minimum levels.
Recommendation #1e: The Federal government should provide the necessary technical assistance to the states in the implementation of the plan.
Recommendation #1f: The Federal government should provide a coordination function for vocational education related federal agencies and organizations.

Issue #2: Should the sole state agency for the administration of vocational education be continued?
Recommendation #2a: The sole state agency concept should be continued but the responsibilities further defined in the law.
Recommendation #2b: The sole state agency should have the authority and responsibility to perform or supervise the performance of certain specified administrative functions.
Recommendation #2c: The sole state agency should have the authority to delegate the performance of administrative functions to other appropriate state agencies but shall not give up the ultimate authority and responsiblity for any function delegated.
Recommendation #2d: The state should have flexibility to assign the authority and responsibility for the administration of vocational education (sole state agency) to any agency or board.
Recommendation #2e: The responsibility for determining the pattern of staffing for the administration of vocational education should rest with the state.

Issue #3: Should the Federal legislation provide for the support of local administration?
Recommendation #3: The Federal legislation should specifically allow for the financial support for local administration.

TOPIC VIII Administration of Vocational Education, continued

Issue #4: Should Federal legislation specify the role of national, state, and local advisory councils?
Recommendation #4: Federal, state, and local advisory councils should be continued with added emphasis on having a local advisory committee for each program area within a school.

TOPIC IX Consumer and Homemaking Education

Presenter: Aleene Cross

Issue #1: What is Consumer and Homemaking education (C&HE)?
Recommendation #1: C&HE prepares males and females for the occupation of homemaking which requires these essential skills: (1) providing for personal and family development at the various stages of life cycle and for establishing satisfying personal and family relationships, (2) caring for and nurturing children, (3) providing nutritious food for self and family members, (4) selecting and maintaining housing and living environments for self and others. (5) providing and caring for personal and family clothing, and (6) managing financial and other resources. Values, management, and interpersonal relationships are major concepts that unify the content areas: child and family development, clothing and textiles, foods and nutrition, consumer education and resource management, and housing.

Issue #2: What current socio-economic concerns can C&HE impact upon?
Recommendation #2: The socio-economic concerns identified should relate to the family and include, but not be limited to, energy, nutrition, family violence, school-age pregnancy, parenting, inflation as related to family economics and consumer behaviors, and care of the aged.

Issue #3: Should the response to socio-economic concerns be preventive through regular programs, remedial or both?
Recommendation #3: C&HE should be both preventive and remedial with more emphasis on preventive education.

Issue #4: How adequate are current programs to address socio-economic concerns?
Recommendation #4: In order to have maximum impact, offerings would need to be expanded with the necessary staffing, in-service training, curriculum development and media.

TOPIC IX Consumer and Homemaking Education, continued

Issue #5: Should C&HE be limited to secondary and adult students?
Recommendation #5: It should be permissible to use monies for programs at all educational levels.

Issue #6: Should C&HE be made available to special populations?
Recommendation #6: Monies may be made available where appropriate within regular school programs as well as in the community for special populations such as the aged, school-age parents, single parents, displaced homemakers, persons in correctional institutions.

Issue #7: Should emphasis be given to on-going programs which prepare for the occupation of homemaking?
Recommendation #7: Monies should be provided to extend, improve and where necessary maintain existing programs.

Issue #8: Should FHA be identified in the legislation?
Recommendation #8: FHA should be included if all other student organizations are named, but not made mandatory and should also be in C&HE subpart.

Issue #9: Should support services be included in C&HE subpart?
Recommendation #9: Ancillary services named should include teacher training, curriculum development, research, program evaluation, development of instructional materials, exemplary and demonstration projects, provision of equipment, teacher supervision, state administration and leadership.

Issue #10: Should program evaluation be expanded to include qualitative as well as quantitative evidence?
Recommendation #10: Evaluations should be in terms of objectives and include all groups served by a state.